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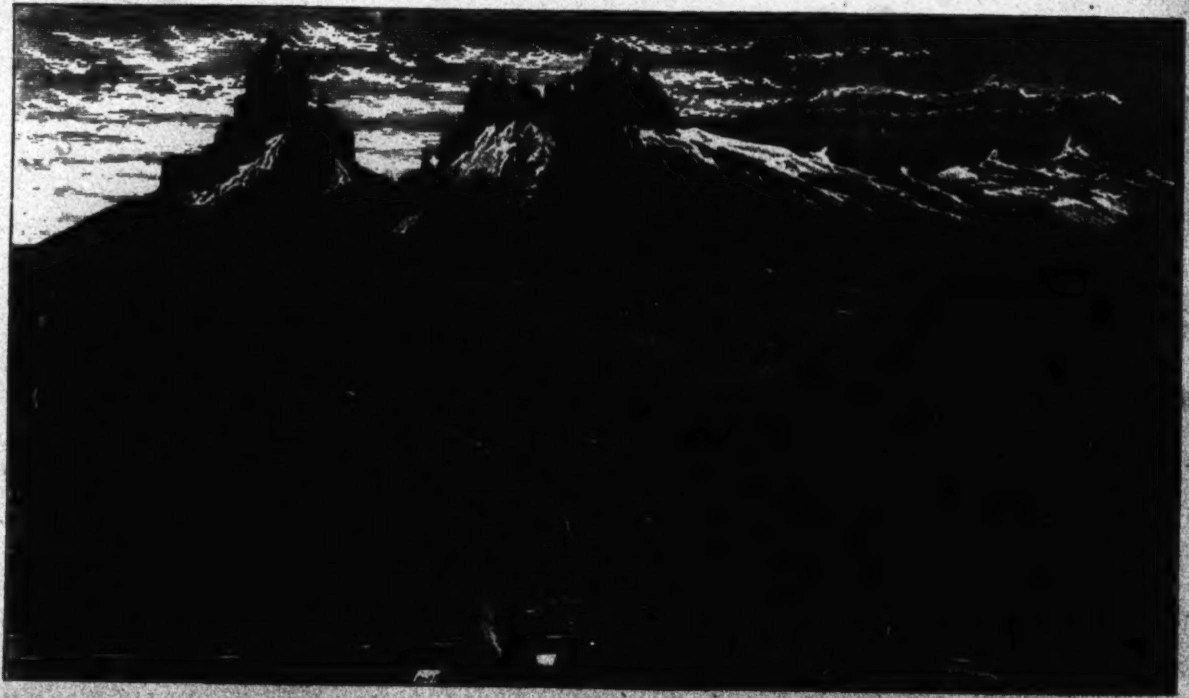

"THE WILD-HORSE GLEN."

RAMBLES IN NORTH-WESTERN AMERICA

FROM THE

PACIFIC OCEAN TO THE ROCKY MOUNTAINS.

BEING A DESCRIPTION OF THE PHYSICAL GEOGRAPHY, CLIMATE,
SOIL, PRODUCTIONS, INDUSTRIAL AND COMMERCIAL RESOURCES, SCENERY, POPULATION, EDUCATIONAL
INSTITUTIONS, ARBOREAL BOTANY, AND GAME
ANIMALS OF OREGON, WASHINGTON TERRITORY, IDAHO, MONTANA, UTAH,
AND WYOMING.

BY

JOHN MORTIMER MURPHY.

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CHAPMAN AND HALL, 193 PICCADILLY, W.
1879.

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PREFACE.

IN preparing this work my object has been to make it as concise and reliable as possible, and to confine its scope to descriptions of the regions mentioned, so that persons may know them as they actually are. It would have been an easy matter to enliven it with personal adventures by flood and field, but to add them would be contrary to the aim I had in view, and would, in my opinion, fulfil no useful purpose.

Previous to undertaking its publication I received complimentary letters from some of the leading officials of the States and Territories described, which specified that I had made myself acquainted with their respective sections by travelling extensively over them, and by making assiduous inquiries among all classes of people. The work will, therefore, I hope, be found accurate in its details.

The entire region described is, in my estimation, one of the grandest in the world, as it teems with natural wonders; its scenery embraces every form of beauty, from enchanting loveliness to sublime grandeur; the fertility of the best portions of its soil has passed into a proverb; it is richer in precious and useful minerals than any equal area on the globe; its climate is considered to be very healthy, and to be varied enough to suit nearly all temperaments; and it has no peer in the extent and excellence of its grazing grounds.

That its advantages are becoming known is made evident by the large numbers of persons that are now seeking homes there; whilst tourists and sportsmen are making it their Mecca.

Having no personal interest whatever in it, my statements about it are prompted solely by its own intrinsic merits, and the recollections of many happy days which I spent amidst its forests, vales, and mountains.

I am indebted to the courtesy of the manager of the *Field* for permission to use two articles on the natural history of the region, which I originally prepared for that paper.

THE AUTHOR.

February, 1879.

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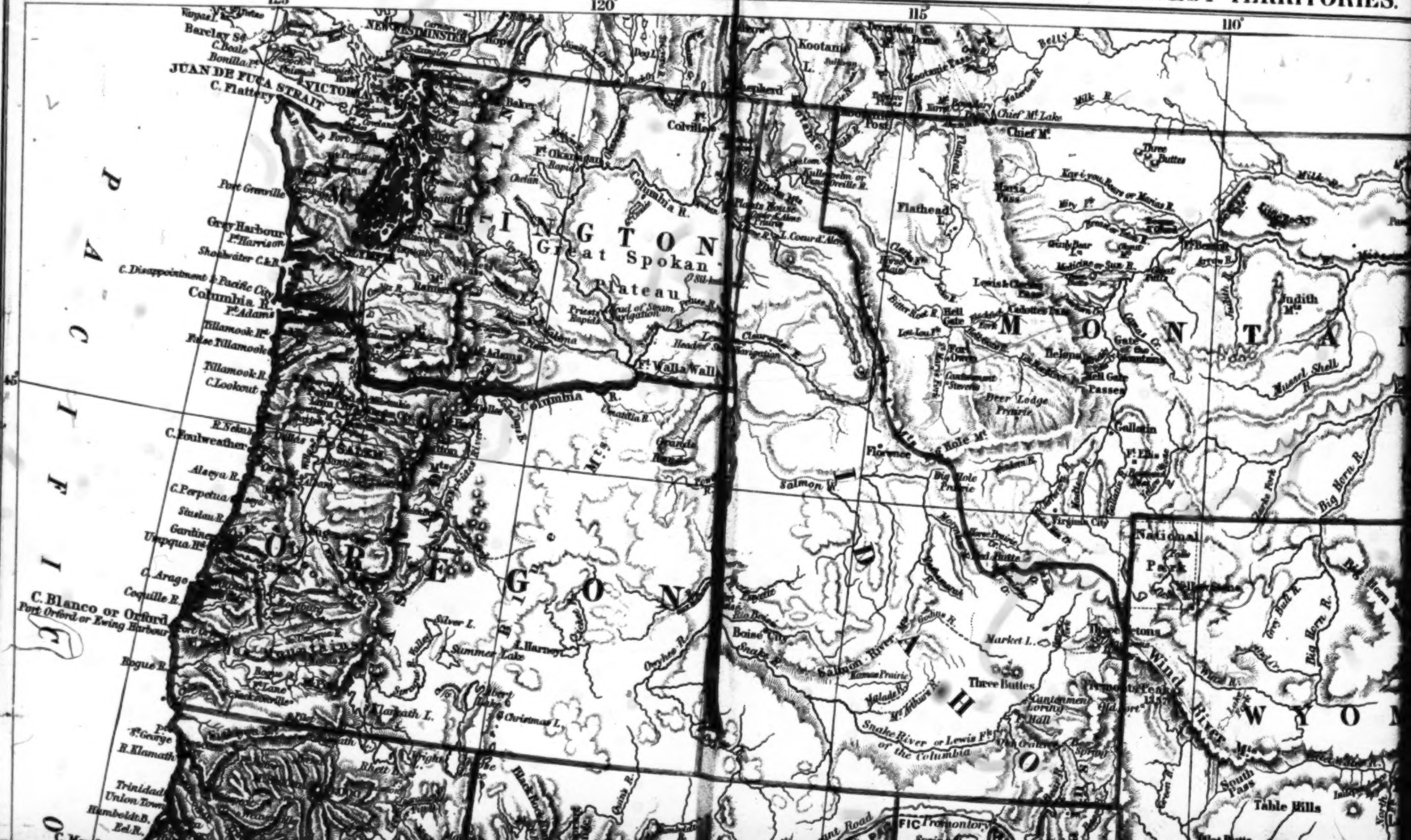

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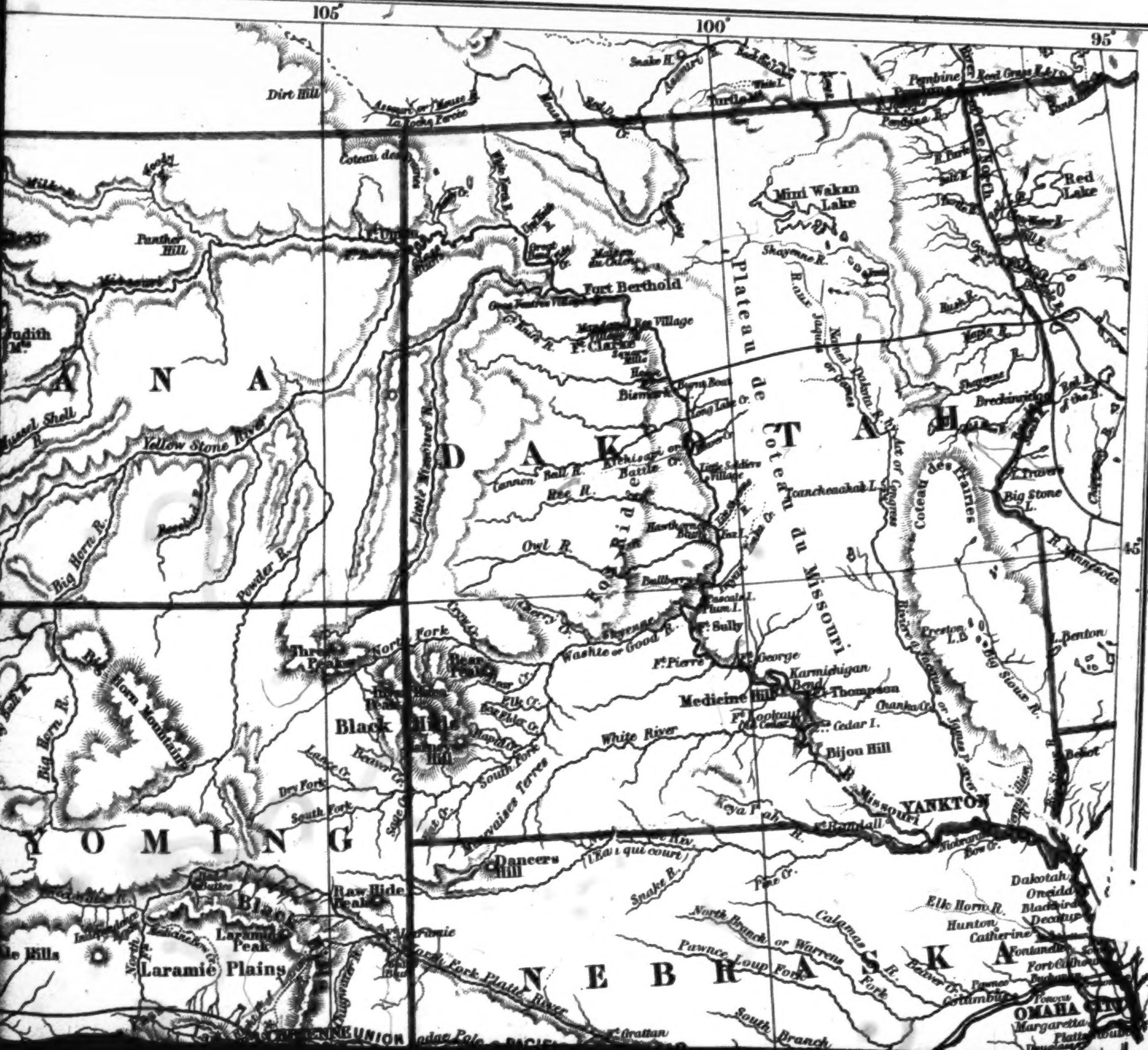
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Snake H.
Turtle M.
Pembine
Red Grass R.
Pembina R.
Red Lake
Mini Wakan Lake
Shayenne R.
Panther Hill
Missouri
Fort Berthold
Mandan & Ree Village
Ft. Clarke
Bismarck
Plateau de Coteau du Missouri
Judith Mts.
Yellow Stone River
Muscel Shell
Big Horn R.
Powder R.
Little Missouri R.
Cannon Ball R.
Rees R.
Owl R.
Battle Cr.
Little Soldiers Village
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R. Minnesota
Cherry Cr.
Shayenne
Washte or Good R.
Ft. Sully
Ft. Pierre
Ft. George
Karmichigan Bend
Ft. Thompson
Medicine Hill
Ft. Lookout
Cedar I.
Bijou Hill
White River
Preston L.
Big Sioux R.
L. Benton
Three Peaks
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Bear Peak
Black Hills
Elk Cr.
South Fork
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Dry Fork
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YANKTON
Ft. Randall
Keya Paha R.
Niobrara
Dancers Hill
L'Eau qui court
Snake R.
Elk Horn R.
North Branch or Warrens Fork
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Calamus R.
Dakotah
Onida
Blackbird
Decatur
Hunton
Catherine
Fontanelle
Fort Calhoun
Pawnee
Columbus
OMAHA CITY
Margaretta
Plattsmouth
Raw Hide Peak
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Laramie Plains
North Fork Platte River
Ft. Grattan
South Branch
CHEYENNE
UNION PACIFIC
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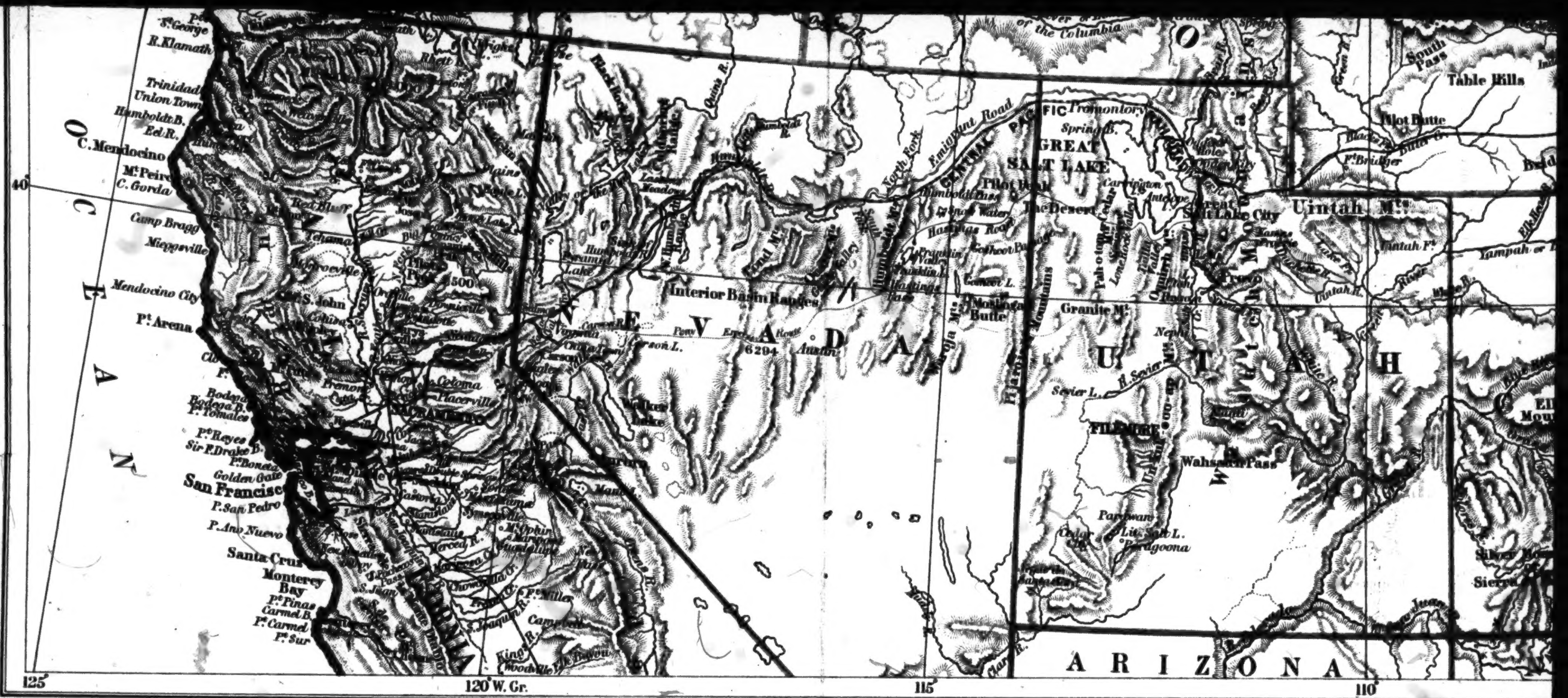

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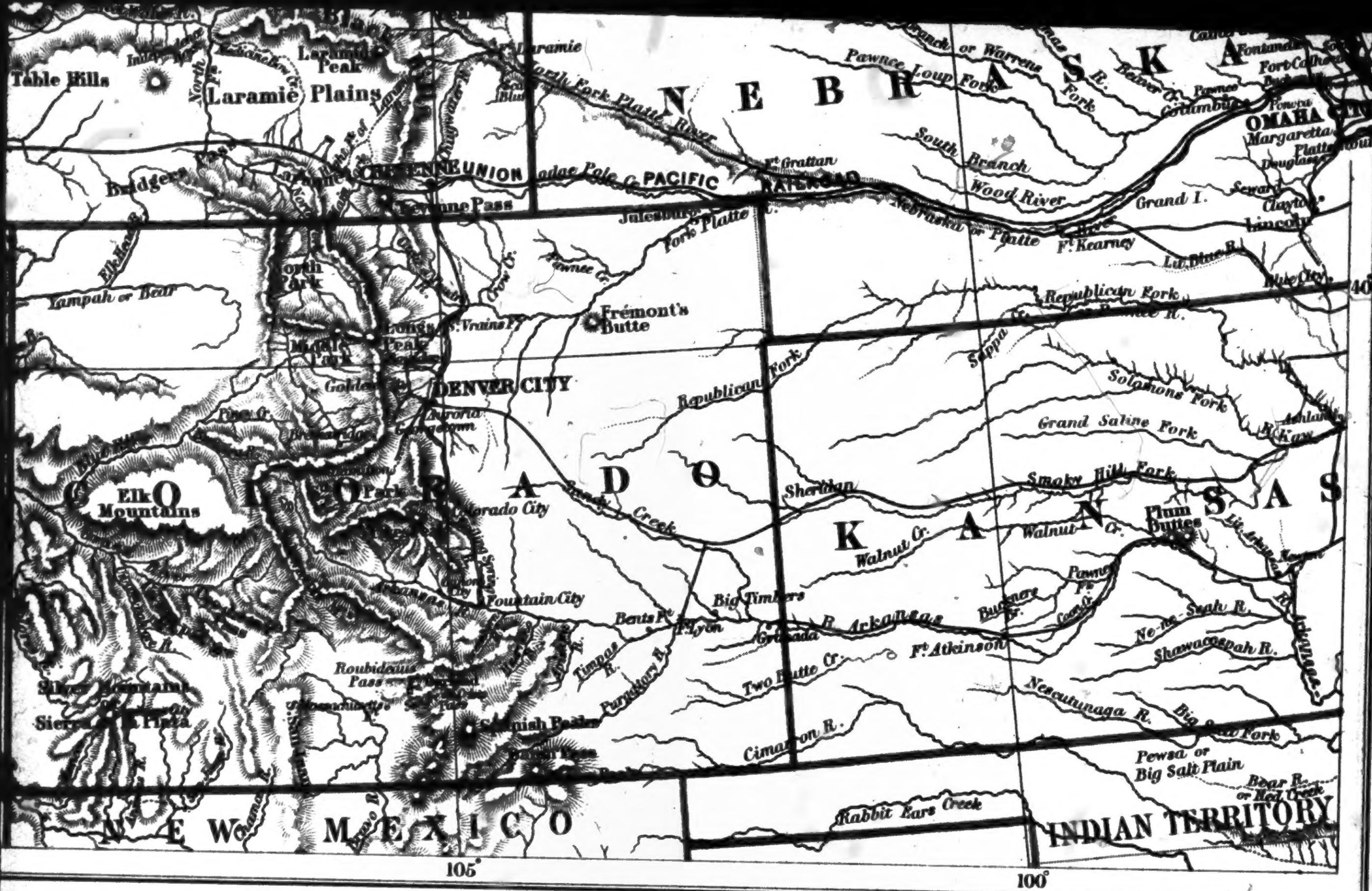

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AMBLES IN NORTH-WESTERN AMERICA.

CHAPTER I.

OREGON—GENERAL SKETCH.

Origin of name—Early history—Famous navigators who visited it—Its physical geography, area, wealth, and population.

IN coasting along the shores of the Northern Pacific Ocean, the first objects to attract the attention of the observant aveller, after he passes the northern limits of California at e 42nd parallel of latitude, are the mighty forests of coniferous ergreens which extend from the sea to the distant horizon an unbroken mass of dark green verdure; the rolling, wooded ountains that stretch inland from the coast in a series of yers; and the towering peaks of the Cascade Range, enveloped shrouds of perpetual snow, which form the background, a distance of about 110 miles from the ocean. The only lours visible in this landscape are green and white, and they ntrast strongly with the deep blue of the sky and sea on a e day, while the absence of any indication of life gives the untry an air of wild, primeval solitude. Though deficient in riety of hue, the scene ashore seems majestically grand to the urist walking up and down the deck of a steamer running close the land; and if he be a lover of the charms of nature he will soon weary of the panorama which is unfolded to him by every turn of the paddle-wheels. This region is the mystic Oregon of ancient geographers, and the enterprising, thrifty, and prosperous Oregon of our days; a country which will compare with almost any equal area in the world in the variety, abundance, and wealth of its resources; and which, though only opened up to American settlers in recent years, can now boast the civilization of the most favoured nations, without any of their drawbacks.

The name Oregon was once applied to the vast territory extending from California to British Columbia, and from the Pacific Ocean to the Rocky Mountains; but it is now confined to the tract lying between the 42nd and 46th parallels of north latitude, its former proportions having been divided into half a dozen territories, several of which are nearly as large as the parent State. The origin of the name is clouded in mystery, as it cannot be found in any of the maps of the early Spanish navigators, who were the first to explore the North Pacific Ocean; and even its signification is a matter of doubt; but I assume, for valid reasons, that it is derived from two Greek words, Ορος, "a mountain," and γανος, "brightness, greenness," as the omnipresent emerald sea of foliage, and the towering mountain ranges, would be the first things to attract the attention of the observant explorers of the sixteenth and seventeenth centuries, and they being men possessed of a high education, what could be more natural than that they should refer to their classics for a name that would express these characteristics in one word? Some persons assume that it might be taken from *Origanum*, the botanical name of the wild marjoram, which grows profusely along the coast; but it is doubtful if navigators would call a country after a plant; and as Vancouver, who thoroughly explored the coast, does not even mention the shrub, it would be safe to assume that the region did not derive its name from *Origanum*. In referring to the early history of the country we find that the first European navigator of note who visited the coast was Juan de Fuca, a Greek in the service of Spain, who sailed as far north as the 48th parallel in 1592, in quest of the Straits of Anian, said by Gaspar Cortereal to connect the Atlantic and Pacific Oceans. He mentions having entered a large body of water, and sailing over it for twenty days, but being attacked by numerous bodies of savages was compelled to return to the open sea, thence to Acapulco, Mexico. This body of water, now known as the Straits of Fuca, forms the boundary between the United States and British Columbia. The query here arises: Might not this Greek have given the country its present title? as Oregon, up to the year 1853, extended as far north as these straits. Bruno Heceta, a Spanish navigator, fitted out an expedition in the harbour of San Blas, Mexico, in 1775, for the purpose of exploring the Northern Pacific Ocean and finding the Straits of Fuca; but being unsuccessful in the latter effort, and having some men, who were sent on shore to make a reconnaissance, slaughtered by the natives, the expedition separated, Heceta taking a southerly course, while Quadra, his lieutenant, proceeded northward. Captain Cook, in his voyage round the world, sought the famous straits also, but not finding them, denied their existence, and sailed for the South Pacific. Berkely rediscovered the straits in 1778, but did not enter; but on meeting Captain John Meares, then sailing under the Portuguese flag, at Macao, he informed him of his good fortune, and the latter entered the much-sought body of water in 1788, and named it after its hardy Greek discoverer. Captain Vancouver was off the coast of Oregon in April, 1792, and tried to enter what is now called the Columbia River, then supposed to be the Rio San Roque of the Spanish navigators; but meeting breakers off the bar, he was unable to do it. On the 29th of the same month he spoke the ship *Columbia*, of Boston, Massachusetts, commanded by Captain Robert Gray, and the latter informed him that he had entered a large river in latitude 46° 10′, and remained there nine days, and called it after his own ship. Vancouver tried to force a passage in there once more on the 17th of October, but was again prevented by breakers. Three days later, however, Lieutenant Broughton, in the armed tender *Chatham*, accomplished it successfully, and surveyed the river for a distance of 100 miles from its mouth. He named the principal bays and headlands, and his titles are still retained. From the fact that it was English officers who first explored it, the British Government claimed all the land watered by the river and its tributaries; but the American Government claimed first discovery, and also presented the treaties with France and Spain, which conceded to it all the land west of the Mississippi River. The justice of these treaties was acknowledged, and under the Ashburton Treaty of 1844 the American Government was acknowledged as the lawful authority over a region nearly as large as the whole of Europe, Russia excepted. The Columbia River did not command much attention from trading vessels for several years, but now the flag of nearly every civilized nation flies over its waters.

The present State of Oregon, which extends from the 42nd to the 46th parallel of latitude, has a length of 350 miles; a width of 275; and an area of 95,274 square miles, or 60,975,360 acres, of which about 15,000,000 acres are surveyed. It will therefore be seen that its area is larger than that of Great Britain by 5,500 square miles. The character of the soil is classified as arable, grazing, and forest land, there being in round numbers about 25,000,000 acres of the first, the same quantity of the second, and 10,000,000 of the third.

The State has a population, including Whites, Chinese, and Indians, of about 200,000; its property valuation is estimated at 165,000,000 dollars, and its exports at 20,000,000 dollars per annum; so that for the number of its inhabitants it is one of the richest and most prosperous commonwealths in the world. Its physical conformation is quite varied, it being divided into two grand divisions by the towering Cascade Range, which runs north and south, parallel to the Pacific Ocean, at an average distance of 110 miles from the sea, and it is again subdivided into sections by mountain chains, which extend transversely across valleys, or diagonally over extensive plateaus. Each section differs in soil, climate, topography, and productions; hence the State possesses a variety of products, climates, and scenery unexcelled by any proportionate area on the American continent. It is well watered throughout, heavily wooded in the western division, and on the mountains, hills, and along the water-courses in the eastern division. Its general outline varies from gently rolling prairies, billowy valleys, and rugged glens in the western, to high broad plateaus, abrupt broken hills, and vast undulating plains in the eastern division. The two principal sections are known as Western and Eastern Oregon. The former embraces the area between the Cascade Range and the Pacific Ocean, and extending the entire length of the State, and the latter that stretching from the eastern slope of the range to Washington Territory on the north, Idaho on the east, and California and Nevada on the south. It embraces nearly two-thirds of the State, having an area of about 60,000 square miles, and differs radically from the western division in every feature. The western has a soft, humid atmosphere, which produces herbage in abundance; the eastern has a dry, invigorating air, which imparts life and animation; the former is divided into rolling prairies, or small picturesque vales; the latter is generally composed of high, undulating tablelands which are seamed by deep canyons, strongly marked by truncated cones of medium altitude which spring abruptly upward from the plains, and traversed by mountain chains varying from 1,000 to 5,000 feet in altitude. Western Oregon, which is the most densely populated section, and the best portion of the State for agricultural purposes, may be called one vast valley, which is cut into three parts by mountains varying from 2,000 to 5,000 feet in height. These are known as the Willamette, Umpqua, and Rogue River Valleys, the former being the most northerly. It is separated from the Umpqua by the Calapooia Mountains, and the second from the Rogue River by the Umpqua Mountains; while the Siskiyou Range divides the last from California. West of the Coast Range, and lying between it and the ocean, is another tract called the Coast Region, which differs from the preceding in being almost one unbroken series of hills, interspersed with narrow valleys, and so heavily wooded as to seem an extensive forest.

CHAPTER II.

THE COAST REGION.

Its topography, climate, mineral and agricultural resources—Gigantic trees and magnificent forests—Strange gold-mines—Hunting the sea-otter and other game—A visit to the principal harbours—Astoria—Up the Columbia River.

THE coast country, which extends from California on the south to Washington Territory on the north, and lies between the Coast Range and the Pacific Ocean, has an average width of twenty-five miles, and embraces an area of about 6,000 square miles. It is generally broken and hilly, profusely watered, heavily wooded, and possessed of a rich alluvial soil along the water-courses. The valleys, which are usually long and narrow, follow the courses of streams; yet there are a few which contain several thousand acres, and are comparatively clear of timber. The smaller vales have a very deep, rich soil, but that of the larger is composed of sand and decomposed vegetation, which is capable of producing excellent crops, especially of fruits, vegetables, and tuberous roots. The principal open valleys are the Alsea, Clatsop, Nehalem, Siletz, Siuslaw, Tillamook, and the Yaquina, and some smaller ones on the Coos, Coquille, Rogue, Smith, and Umpqua Rivers. The population of the region is very limited, so that thousands of acres of the finest land on the continent are open for settlement there. With the exception of the places mentioned, the country may be denominated a densely wooded Tyrol, for so rugged is it, and so scarce are roads, that there is not a carriage or a waggon in two counties; hence all travel on land is done either on horseback or afoot, and on the water in canoes, except in the isolated cases where small steamers run a few miles up a river from a mining or a lumbering hamlet.

The population live by farming, wool-growing, stock-raising, lumbering, mining, and fishing and hunting; but the greater number may be said to confine their labours to farming in summer, and to mining along the sea-shore or to hunting in the winter. Nearly all the agricultural class devote a good deal of attention to bee-keeping, as everything is favourable to its success. The result of the experiments made thus far is that the honey of the region is famous for its colour, transparency, and delicacy of flavour. This excellence is due to the humid yet equable character of the climate, which keeps up a continuous succession of flowers from the vales to the mountain-tops for six or eight months, so that the bees have a pasturage that cannot be surpassed, from March to November. The plants on which they generally feed are the whortleberry, salmon, sallal, and other berries, whose flowers contain a large amount of saccharine matter, and as they grow almost everywhere, the honey-makers need never want for an abundance of pabulum. That it is a veritable land of milk and honey would be deduced from the numbers of bees, horned cattle, and sheep that appear in the woods. The entire area is well adapted to stock-raising, as cattle require little care, owing to the persistent character of the grasses and the mildness of the atmosphere, which enable them to live in the open air at all seasons without any other shelter than that afforded by the lee of a hill or the cover of a coppice. Rain falls copiously during the winter, but it is of rather a warm temperature, so warm, in fact, that several species of flowers bloom as vigorously in winter as in spring. Snow is an occasional visitor, but does not remain long on the ground, and ice of any thickness is unknown. One of the grandest features of the coast country is its magnificent forests of evergreens, which attain a height and diameter unequalled by any trees known, except the gigantic *sequoias* of California. Among the most prominent of these monarchs of the vegetable kingdom is the mammoth redwood (*Sequoia sempervirens*), which attains an altitude of from 300 to 400 feet, and a diameter of from 12 to 20 feet. It resembles the sugar-pine in form, but its foliage is similar to that of its congeners, the yew and cypress. It takes its name from the dark red colour of its wood, and as it is useful for many things, is largely employed for manufacturing purposes. The regularity and luxuriance with which it grows makes it a sight worth travelling far to behold, and one actually regrets to see it felled by the axe of the white man. Its northern *habitat* does not extend beyond the 43rd parallel, and as its range is quite limited in the south, it will not be many years, in all probability, ere it will have disappeared before the advance of civilization. It is a great lover of a pluvial climate and the sea-coast, hence is seldom found far away from the ocean.

Next to this comes the Douglas spruce (*Abies Douglasii*), which is the most abundant and the most useful tree in the country, its wood being largely used for lumber and shipbuilding. It often reaches a height of 400 feet, and a diameter of from 10 to 15 feet, grows very straight, and tapers gradually to the top, where it is quite slender. It possesses a large quantity of resin, so makes good fuel, and though coarse-grained and apt to shrink, yet it makes excellent lumber, as it is well adapted to stand rough weather. One of its family, the *A. Williamsonii*, differs radically from this, in being alpine in character, having a foliage somewhat like the larches, attaining a height of only about 100 feet, and being irregular in outline, though graceful and wide-spreading. Trees allied to this, but by no means so handsome, are the leafy-cone spruce (*A. bracteata*), the hemlock spruce (*A. Canadensis*), and the black spruce (*A. Menziesii*), though, to speak correctly, the latter bears a stronger resemblance to its Norwegian congener than to the others. Its wood is very tough, and is, therefore, useful for masts and spars, and the Indians make baskets of its roots.

Three magnificent species of fir grow in this region, although they are also indigenous to the whole of the northern coast. At their head stands the yellow or western balsam fir (*Picea grandis*), a noble tree which attains an altitude of 300 feet, and a diameter of from 8 to 12 feet. It has a dark, dense foliage, and short branches, and these give its top a cylindrical appearance. The wood being fine-grained and elastic, makes the finest spars and masts in the world, and is shipped largely for such purposes all over the globe. This and the red fir are extensively used for lumber and for ship-building. The other two species are the silver fir (*Picea amabilis*), and the noble fir (*Picea nobilis*), and both are quite abundant. The former is a very handsome tree, but irregular in form, and its wood is not equal to the other varieties for manufacturing purposes. It has a beautiful foliage, however, and its towering form and luxuriance of growth make it a most pleasing adjunct to a landscape. The *nobilis* resembles it somewhat, but its foliage has a lighter hue, and the branches are not arranged so gracefully.

Following these come the cedars, the most abundant being the red and white species. The former (*Thuja gigantea*), which seems to be a gigantic arbor vitæ, is widely diffused over the country, yet it never forms forests by itself. It grows to large dimensions, the trunk often reaching a diameter of 15 feet, but it is not so tall as the spruces. The wood is light, soft, and durable, but lacks strength and elasticity. It makes excellent rails, shingles, and finishing wood, and is equal to the redwood for manufacturing purposes. The Indians make canoes of its trunk, as it stands water better than any other wood, and is also lighter and more durable. It has a thin bark, which peels off easily, and this was formerly used by the Indians for articles of dress, and is now employed for the manufacture of hats and baskets by the vagabond tribes. The wood of the white species being soft, fine-grained, light, and durable, makes better fence-posts, pails, barrels, and other domestic articles, than any other known. The abundance of these useful trees makes the coast region one of the largest lumbering districts in the world, and the lumber is shipped to Europe, South America, Australia, India, China, and Japan, where it meets a ready sale at good prices. Even ship-building is successfully carried on there now, as the timber can be cut down close to the sea, and the vessel built without any greater loss of time and trouble than putting her into shape, and dispatching her into her native element within a distance, perhaps, of a few hundred feet of where the material of which she is made grew three months previously. Several vessels built in Coos Bay have turned out to be excellent craft, some of them being rated as high as A 1½.

No grander botanical scene can be found anywhere than that presented by a dense forest in this region, for towering firs, spruces, and pines, with their acerose foliage and gloomy colours, present a strong contrast to the compact forms and bright leafage of the tropical-looking arbutus, the aromatic laurel and ceanothus, the tree-like, rich-hued, odoriferous rhododendron, and the gay maples and cornels, whose brilliant flowers perfume the air. The shrubbery also aids the picture, as it grows in tropical luxuriance, while mosses hang in garlands from the trees, vines entwine them in tangled masses, and gaudy wild flowers thrive wherever they have a place to raise their heads. This close mingling of northern sedateness, if not sternness, and southern arborescent brightness, make a marked impression on the mind, and one it does not readily forget.

I made my first tarry in this section at Ellenburg, a picturesque hamlet situated at the mouth of the Rogue River, near where it empties into the ocean. The people who inhabit this lonely spot live by lumbering, salmon-fishing, and mining,—if gathering auriferous sand might be called mining. This sand, which is exceedingly black and heavy, is found scattered along the shores of the Pacific Ocean for a distance of 100 miles, after every storm, and is eagerly examined by the dwellers on the coast, to see if it contains gold enough to pay for working it. It was, in former years, considered to be the best paying "dirt" in the country, as it contained an unusually large amount of the auriferous material, which was obtained with a little washing, so that its extraction cost neither much time nor trouble.

The sand being piled up on the beach to a height of from 6 to 30 inches after every storm, led many persons to believe that one of the richest mines on earth was scattered along the shore; and that many think so now is evident from the numbers that watch the beach after every tempest, to see if they cannot pick up a fortune at once. It was formerly no uncommon occurrence for a man to extract 1,000 dollars in a day from this sand, and for several to gather from 20 to 100 dollars; but such sums cannot be obtained now, owing to the recession of the bluffs from which the precious metal was stolen by the sounding main. The idea that a gold-mine exists in the ocean, and that its contents are washed ashore by the waves, is so prevalent among some people that nothing can induce them to believe otherwise. The fallacy of this is readily apparent, for it is not probable that gold, which has heavy specific gravity, would be washed ashore and lighter material left behind.

The real origin of this peculiar mine is, undoubtedly, the auriferous slate which forms a large portion of the ridges facing the ocean, and which is constantly undergoing decomposition from rain and other elements. As soon as it becomes pulverized it is carried outward, where it is acted upon by the waves, which sift and separate it from the other materials, and leave it exposed to the observant eyes of enterprising miners. As it is washed very fine, no nuggets of greater value than a few cents have been obtained. Its fineness causes a large portion of it to be lost, and its value is also somewhat impaired by having mingled with it osmium, platinum, and iridium.

Although heavy sums are now found occasionally, the sands are only worked during the winter, except in isolated cases, and then principally by farmers whose work for the year is over, and who are glad to do anything to pass away the rainy season. The adventurers who formerly roamed over the beach in search of "big strikes" have turned their attention to some other occupation, they having wisely concluded that steady labour and good pay are preferable to the shadowy fortunes promised by angry waves.

Leaving this place, I sailed for the largest and best port on the Oregon coast, Port Orford, a little village containing about 200 inhabitants. This harbour is two miles long and one wide, and its depth ranges from a few feet to four fathoms. The hamlet, which is situated on a bluff 100 feet high, is rendered quite interesting to the geologist by the large number of marine fossils found in its vicinity, and to the lover of wealth by the auriferous sands which are scattered along the shore about four miles from the ocean, and the lodes of chrome, silver, and gold recently discovered in the interior.

Vast tracts of grazing lands lie at the back of the town, but they have as yet been scarcely trodden by the foot of the white man. Four miles off the harbour lies a group of dark, basaltic islands, which are frequented by thousands of sea-lions and sea-birds, and their incessant barking and screaming, mingled with the deep roar of the white, bounding surges, unite in forming a picture expressive of the rudest wildness. The Indians sometimes kill a few of the sea-lions for the purpose of procuring oil for their wigwams, but with this exception they are unmolested. Even the right whale *(Balæna mystecitus)*, which is very common on the coast, and which yields an oil that brings a good price, is not utilized, except by hungry red men; and as for the common seal, the porpoise, and the black fish, which move in immense shoals close to the shore, no one pretends to consider them of any importance. The only animal that is hunted in the interest of commerce is the sea-otter *(Enhydra marina)*, and those acquainted with its habits, and dexterous with the rifle, manage to spend a most profitable season in its pursuit, as its skin brings from 40 to 100 dollars in the markets of China. As this beautiful creature may be said to be the connecting-link between the otter and seal families, it is rarely found on land, and never on the mainland, though it may frequent the mouths of streams flowing into the ocean. It is quite common on the coast of Oregon at certain seasons, but owing to its extreme vigilance it is very difficult of approach without being detected, and this necessitates such an amount of patience, caution, and cunning on the part of a hunter who would be successful as to prevent many persons from engaging in its pursuit.

During the fine days of summer a school may be seen moving up or down along the coast at a rapid rate, or quietly distended on their backs, as if asleep, and sailing with the current. The usual posture of the animal is to lie flat on its back; and when mothers have their young with them the puppies are enclosed in their arms, much as a woman would hold a child above her head. When a number are together, mothers and offspring play in the most affectionate manner, and tumble under and over the water in joyous freedom. The affection displayed by the matrons ought, apparently, to appeal to the tenderest sympathies of the human heart, but to the rough Nimrods it only appeals to their pockets; hence the presence of a school with young in it is gladly welcomed, as nothing but death can separate parent and puppy, so both are captured. When a school is seen it is chased immediately in canoes, and as soon as its members dive, the boats spread out in every direction, and when one appears above the surface it is fired at, and if shot, is brought aboard with grappling-irons.

The creatures are pursued so hotly sometimes that they are forced to remain under water until they can no longer breathe, and when they rise to the surface their lungs become so full of air that they cannot dive again, and are, by this means, captured alive. The Indians frequently succeed in slaying large numbers during the prevalence of a heavy storm. When the tempest is raging they launch their canoes, which are well stocked with clubs, and land undetected on the rocky islets where their victims congregate for shelter, as the roar of the billows and the tempest drowns all other noises. When they find the rookery, they ply their clubs vigorously, and with such effect that they often kill from thirty to 100 ere the animals become alarmed enough to plunge into the seething ocean. Some expert hunters earn from 200 to 1,000 dollars during a season by otter-shooting, and all engaged in it secure good wages.

This species is confined to the North Pacific Ocean, its range extending only from California to Alaska; but it is now more abundant off the coasts of Oregon and Washington Territory than it is farther north, owing to its being comparatively little hunted. Some Nimrods, who do not care much for the briny deep, devote their time profitably to the slaying of bears, panthers, elks, and the smaller deer which abound in that wooded country. The Coast Range might be called one vast deer park, in which thousands of antlered monarchs, who know not the form of man, roam at large. The elk may be found there in herds varying from fifty to 500; but it is unmolested by aught save a few hunters who need venison, or its antlers, which are in active demand for the ornamentation of the dining-rooms of wealthy families. If one would become satiated with hunting, he cannot find a better region than this for indulging his appetite, as representatives of nearly every quadruped on the American continent that love the woods may be found there.

Moving north by sea from Port Orford, the traveller is struck by the high wooded character of the shore, and the long spurs of the Coast Range, which jut far out into the sea, forming bold capes and promontories. The most prominent of these is Cape Gregory, which was discovered and named by Captain Cook. This rises up so precipitately as to form a perpendicular cliff, and under it vessels can anchor in ten fathoms of water, and ride out south-east gales; but they must be prepared to put to sea should the wind change to the south-west. The first important harbour north of this is Coos Bay, two and a half miles distant, which has a length of ten miles and a width of two, and a depth of two fathoms. The bar is shifting, and as a heavy surf rolls over it during a north-west storm, it is somewhat dangerous to enter, except in fine weather, and then only with vessels of very light draught.

A picturesque town of several hundred inhabitants, called Empire City, is perched on a bank of the bay, and commands a splendid view of both the harbour and the ocean. This is quite a thriving place, lumbering being carried on extensively in its vicinity, while coal-mines employ a large number of men. This coal makes excellent fuel, burning freely and without much odour, and being very clean; but, owing to its low illuminating power, it is not used for producing gas. The strata in which it has been found are supposed to extend the entire length of the State, and to jut up into the Coast Range, as it has been traced in several places far apart, and high up on the mountains. Should these surmises prove correct, which is more than probable, Oregon will have within its borders all the elements necessary for the successful prosecution of the most important manufacturing enterprises. Copper, iron, galena, and quicksilver are found near this place, but the want of population and capital prevents their development. Some fine syenite and oolite underlie a large portion of the country, and crop up into low hills; but no use is made of them, as the people prefer wooden to stone houses.

Empire City is a good specimen of a western village, being prosperous and energetic, and attached to education, temperance, religion, and benevolence, if the number of schools, churches, and societies are any criterion of its sentiments. Like older places, it is also fond of political discussions, and having its own merits made known; hence it supports a weekly newspaper with a generosity scarcely to be expected. One peculiarity of all petty towns in Oregon is that they support a newspaper, and, if their population exceeds 1,000, perhaps two, so that each political party may have its own organ to enlighten and defend it. In debating political questions the managers of rival journals treat each other too frequently as the Pickwickian editors did, and the result is a vigorous leading column, which is amusing if not instructive. The way these gentlemen of the quill handle an opponent is a caution; but then they can also be extremely courteous, if not chivalric, if they wish to be so, or they think courtesy is deserved.

Moving northwards from this village, I next stopped at Yaquina Bay, a small harbour whose bar is seldom free from breakers, and whose seaward current runs at the rate of six knots an hour, so that it is tedious work for a vessel to beat against it. On the north head is the village of Newport, a mere fishing station, where salmon are caught in summer, and whence oysters are shipped in winter. The great industry of the bay is oyster culture, and all engaged in it seem to be prosperous. The bivalves have an excellent flavour, which makes them great favourites with the epicures of California; hence all shipped there are promptly sold.

Twenty-six miles up the Elk River is Elk City, a hamlet containing about 100 inhabitants. Communication is kept up between this and Newport by means of a small steamer, but persons in a hurry seldom wait for that, but depend on their arms, a stout paddle, and a light canoe to take them to their destination. This place is important only for its position, it being in the centre of a fine agricultural region, and surrounded by some picturesque scenery.

One of the most interesting spots on the bay is the hamlet of Yaquina, a mere lumbering mart, which is a popular summer resort, as the heat there is never disagreeable, and excursion and picnicking haunts are quite numerous. The salubrity of the climate of the coast region may be inferred from the meteorological tables kept at Port Orford for several years. From these we learn that the average temperature for spring is 52°; summer, 60°; autumn, 55°; winter, 47° 5′; yearly mean, 53° 5′ This would make only a difference of 5° between spring and winter, and 13° between summer and winter, so that it might be considered to have the most equable climate in the world. Its greatest drawback is the quantity of rain that falls; but as that is confined principally to the winter months, and the heaviest fall occurs at night, it is not so disagreeable as one would imagine, nor so frequent in summer as to check pleasure much.

From this point I sailed for the Columbia River, which is the most northerly harbour in the State, and on my way up passed Tillamook Bay, another small but snug harbour, where oysters are cultivated, and the bold, towering cape, called Tillamook Head, famous as the spot in which a Japanese trading junk was wrecked several years ago, long before the paleface was known in the country. Some ethnologists having heard this tale, revived the theory that the Indians of the North-west were descended from some castaway natives of the Orient; but as the red men themselves had no such tradition it was allowed to die of inanition. As we approached the river we could only detect it by the booming of the combers that surged onward in serried ranks, and hurled themselves on the white beach in tempestuous masses of foam, for the mouth was so wide that we could not tell where the ocean ended and the stream commenced. I had often heard that its bar was dangerous for vessels of heavy draught, but if it was, the danger has disappeared since the inauguration of the tug service and a Pilot Board. It has an entrance five miles wide, between Cape Disappointment, in Washington Territory, and Cape Adams, in Oregon, which is divided into two channels by a sand-bar. The south channel, which is the one used, is over two miles wide, and has four fathoms of water at the lowest stage, so that it presents no obstacles to the passage of heavy-laden vessels, if guided by experienced pilots or towed by a powerful tug. This noble river, to which Bryant refers in his stanza,

> "The mighty woods,
> Where rolls the Oregon, and hears no sound
> Save its own washings,"

has a length of 1,300 miles, so that it is the third largest river in North America. It waters, with its tributaries, 8,000 square miles of the State of Oregon, and acts as a boundary between it and Washington Territory for a distance of 300 miles. It is navigable for sea-going ships 115 miles from its mouth, and for steamboats 165 miles, but its total navigable distance for steamers amounts to 470 miles. Its importance to North-western America may be inferred from the fact that it waters, with all its affluents, fourteen degrees of latitude. It has no peer in the world in the grandeur of its scenery, and from its mouth to its origin in the Rocky Mountains it is one panorama of new and strange beauties. The first town inside the entrance is Astoria, which is about twelve miles distant. This place has the honour of being the first settlement made west of the Rocky Mountains by Americans, having been established in April, 1811, by persons sent out by John Jacob Astor to open a trade in furs with the Indians. It continued to prosper until 1813, when the English sloop-of-war *Raccoon* captured it, England and the United States being then at war. After the Treaty of Ghent it was restored to the Federal Government, and since that time it has kept pace with the progress of the country. It now boasts a population of 1,000, possesses churches, schools, and some excellent public buildings, the most important of the latter being a handsome

Custom House, constructed of the blue sandstone with which the neighbourhood abounds. The country surrounding it is heavily timbered, and this ought to give it prominence as a lumbering and ship-building mart. It is also a favourite summer resort, owing to its proximity to the ocean, the opportunities afforded for bathing, boating, fishing, and hunting, and the many picturesque views adjacent.

One of the most charming scenes in its vicinity is Young's Falls, a pretty cascade that bounds suddenly from its leafy covert and plunges into the shrubbery below, a distance of 80 feet, in an apron of foam. These falls are rendered unusually interesting by the number of birds that frequent them, the profusion of the flora, and the magnificence of the firs that environ them. They are a favourite summer camping-ground for the Clatsop tribe of Indians when out on a berry-picking expedition, as they can find in close proximity not only their favourite fruits, but also plenty of fish and game.

The Clatsop Plains, not far distant, are rendered quite interesting by the large number of Indian graves found in the woods. The dead in all cases are wrapped up in old clothes and placed in the canoes, and, for fear any sacrilegious hands might desecrate the wooden sepulchres, they are pierced with holes, in order to render them useless. Being desirous of exploring some of the streams that ran through the woods, and having no means at command with which to do it, I threw its bony contents out of a canoe, patched it up, and was soon deep amidst wild forests. My sacrilegious act was not discovered, however, else I might have reaped a whirlwind of wrath that would have brought me anything but the blessings of peace.

CHAPTER III.

THE SALMON FISHERIES.

The different species of salmon; their extraordinary abundance, and the mode of canning them—Best varieties for angling purposes, and the bait used—The marine fisheries.

I TOOK passage at Astoria on one of the handsome steamboats which ply on the Columbia, as far as Portland, 110 miles distant. The number of passengers aboard was quite limited, yet all were interesting, for each person had that air of individuality and self-reliance so characteristic of adventurous natures. They bore no placid look of peace; on the contrary, they looked like men who had roughed it through life, and knew what hardship and hunger, defeat and victory, meant. I found them extremely courteous, and willing to give all the information in their power to the inquiring stranger, and, when he manifested an interest in their conversation, to relate tales of their own early struggles,—how they had crossed the plains in bullock-carts, and defied the attacks of cold, famine, and treacherous Indians; how they were at first compelled to resort to any labour to obtain a subsistence; and how, finally, by practising economy and perseverance, they were enabled to reach a position of worldly comfort, if not of great wealth. The lives of some were perfect romances, and, if written graphically, would prove as deeply attractive as any modern fiction. As the boat proceeded up the river I noted that the forest was exceedingly dense on every side, and as no human habitations were met for a distance of several miles, the shore looked as primeval as if it had never been trodden by the foot of man. Green and white, monotonously repeated, were the only hues visible, if I except the muddy colour of the river, which was then laden with the sediments of the June freshets; yet the landscape, owing to its extensive proportions, was always interesting. The river presented a noble expanse of water, as it averaged from two to seven miles in width; the woods seemed interminable; the coast chain of mountains displayed the eccentric outlines of igneous formations in some places; and, far in the east, towering snow peaks, which loomed above all objects, pierced the clouds to an altitude of nearly 12,000 feet, and completed a picture supremely grand.

The most prominent landmark encountered on the way up was a promontory 200 feet high, called Coffin Rock, on account of its having been used by the Indians as a burial-ground. The remnants of several canoes in which the dead were placed are still visible, but the greater portion have disappeared before the ravages of time, and left the bleached bones on the ground to attest the fate of the sepulchres. The red men look upon this as sacred ground, and few indeed are those who would tread it for any consideration.

At this point farm-houses begin to appear, and increase in numbers until Portland is reached. The salmon fisheries are also more numerous, and the heavy, curling smoke that issues from their chimneys gives the silent forest an indication of life most pleasing to behold. The stream is made interesting by the white boats that ply up and down with the fishing-nets, or hasten shoreward with their finny cargo. A fishery usually consists of a long, two-storey wooden building, divided into compartments, each compartment being reserved for some special work. Thus, one is devoted to the making of barrels, another to cans, a third to cooking the fish, a fourth to canning, and so on, according to the different processes required to prepare it for market. Chinamen are employed largely in such establishments, owing to their obedient nature, their cunning dexterity, and the low rate at which they work; hence their elliptical eyes, lemonish complexion, and dull expression, are the first human objects to present themselves at a fishery.

The characteristic fish of the North Pacific Ocean is the salmon, it being found in countless myriads in all fresh water communicating with the sea, from California to Alaska. There are supposed to be fourteen distinct species peculiar to the North-west, but the best naturalists think this number is too many, and is due to a want of careful study on the part of those who classified them, for it is a well-known fact that some varieties change so much in form and colour after the labours of spawning as to be mistaken for a new species by even close scientific observers. Until some more accurate information is obtained, however, I have deemed it best to adhere to the present nomenclature, and to follow the classification of the best-known authority on the subject. The salmon commence entering the Columbia and its tributaries about the 1st of April in such numberless millions that the water fairly boils with them, and by the middle of the month they are so dense that they crowd each other ashore, and myriads die from exhaustion. These furnish a bounteous feast to carnivorous birds and quadrupeds for four or five months; but numerous as the latter may be, they cannot eat a fraction of the throng wrecked on the beach for a distance of hundreds of miles.

The finest specimen of the family, and the first to arrive in April, is the so-called spring silver salmon, the *Salmo quinnat* of Richardson, and the *tyee*, or chief salmon, of the Chinook Indians. This is the variety which is now sold all over the world as "Oregon canned salmon," and of its gastronomic qualities nothing need be said to those who have enjoyed its delicious flavour. This species enters the rivers in countless myriads, and keeps pouring in for three or four months without much apparent diminution in numbers. The larger and older fish are at the head of each school, and through and over many an obstacle they lead their teeming hosts, until they finally reach the grounds where they are to deposit their spawn. The Indians along the Frazer River, in British Columbia, call these leaders the *mee-oo-tees*, or chiefs, as the greater portion are so attenuated in their efforts to reach the spawning-grounds as to present the appearance of living skeletons. The snout is often worn away, and it is a frequent occurrence to find many minus an eye. I have seen these leaders and their followers trying to drag their emaciated frames over the rocky shoals and bars of rivers when they were so exhausted that they made little effort to escape from the hand which captured them in the water. When waterfalls oppose their progress few sights are more interesting than to see thousands of them hurling themselves into the air at the same time, in their efforts to surmount the obstacle, then falling back with a loud thud into their native element, only to renew their efforts, if the numerous shocks and collisions have not killed them. When they reach a locality suitable for the deposition of their ova, they hug the shore; the female then leaves the throng, and moving to the spot selected for a nest, points her head against the current, and by using the tail gently, retains her position long enough to deposit the eggs. This done, she darts away suddenly, and her male companion assumes her place, and when he has dropped the impregnating milt, he also shoots away abruptly to join his spouse. Each couple succeed one another in this manner with the greatest regularity, until all have accomplished that mission which a blind instinct has made them dare all danger to perform. When they resume their march to the sea many are so exhausted as to be unable to undergo the hardships they encounter; so they leave their bones to bleach on the shores of the streams, for their emaciated bodies do not contain flesh enough to give even a hungry coyote a feast.

Salmon always escape currents if possible, and the Indians of the North-west avail themselves of this characteristic to lead them to their destruction. They build small walls of stone, a few inches in height, and extending perhaps 10 feet or more into the stream, at several points along the shore. This breaks the force of the current and produces "dead water" for some distance below it. The fish during their upward course follow the line of obstruction to keep in the placid water, and there the Indians capture them by the thousand, either by spearing them or by using scoop-nets. They are so dense in some places that the dusky fishermen merely put their paddles into the water, and with a sudden jerk hurl three or four at a time on the banks, when they are soon finished by the squaws and papooses. The number destroyed in a year by the red men may be inferred from the fact that all the tribes living along the Columbia and its tributaries, for over a distance of 400 miles, live almost exclusively on salmon, and have done so from time immemorial. The same may be said, though in a lesser degree, of the tribes along Puget Sound and the sea-coast of British Columbia and Alaska; so that salmon may be said to be the main support of perhaps a quarter of a million of Indians. Add to this the number which die through sickness and exhaustion, and one can obtain some idea of the immense destruction of fish each year; yet their numbers do not seem to decrease.

The Federal Government has an establishment on the Columbia River, where fish-hatching is carefully studied, and from this point salmon-eggs are sent to those places in the Atlantic States that need re-stocking. The *S. quinnat* is, I believe, the only species whose ova are used, as it stands at the head of its family in size, delicacy of flavour, and hardiness; and thus far it has proved itself capable of thriving wherever it has been transplanted. The Indians say that this species does not eat food after it once enters fresh water for the purpose of spawning; and some, I may say the majority of anglers, assert that it cannot be induced to take a fly under any circumstances. Such was the opinion also of a gentleman (since become peculiarly prominent for a report of his), who was sent out from England to Oregon early in the present century to examine that country, and learn if it was worth keeping from the Americans, who were clamouring for it. His first examination consisted in trying the salmon, and finding he could not induce them to take a fly, he became disgusted, and on coming home reported that the infernal country was good for nothing, for even the salmon would not take a fly. This report is said to have actually decided the British Government in surrendering this vast and treasure-laden region to the Federal Government, under the Ashburton Treaty of 1844—a treaty which has now become famous as "the Waterloo of English diplomacy." The Commissioner had made a mistake in natural history as well as in diplomacy, for the *S. quinnat* will take a fly, but not as its British congener will, it being more moody in character and more erratic in taste than *Salmo salar*. It will not bite, except under certain circumstances; and as my experience of the circumstances is rather limited, I will only mention the instances in which I was successful. I caught four with a fly one fine day in April, in a small tributary of the Columbia, and on another occasion stowed half a dozen into my basket through the same means. The latter I caught early in the morning, during the prevalence of a heavy fog, which somewhat obscured the water, and doubtless prevented the fish seeing the line. The salmon were running up at this time, so it would seem that they do take food sometimes during a visit to the spawning-grounds, and have no objection to a captivating gaudy fly when they are in the mood. A keen angler, an officer in the 1st Cavalry, informed me that he had often tried this species with the most alluring flies, but never succeeded in hooking any, except in two instances, and in these he thought the fish swallowed his bait more for pastime than for any desire to take it for what it was intended to represent.

I have heard of its being caught with a fly in the rivers of Northern California, and in some other places; hence the deduction would be that it will rise to a fly-hook under favourable conditions; but what these conditions are can be learned only by the keen angler who has the patience to study them out, or who may hear them from those who have gained the necessary experience.

When fresh from the salt water the *S. quinnat* is a magnificent specimen of its race, and one whose capture ought to arouse the enthusiasm of the dullest Waltonian. The head, its most characteristic feature, is large, full, and pointed, and about one-fourth the length of the body; the nose, or snout, is cartilaginous, the tail deeply cleft, and dorsal outline finely arched. The general tint of the back is bluish-grey; sides, ashey-grey with a silvery lustre; the back above the lateral line is studded with irregular rhomboidal spots, some of them ocellated; the scales are large, and the branchial rays vary from fourteen to twenty. As this is the only species largely exported abroad, a description of its mode of capture and preparation may not prove uninteresting to those who have never witnessed the operation.

The fishing season commences early in April, and lasts until the middle of July or the 1st of August. The Columbia River during that time presents a scene of activity which is only equalled by the coast of Brittany during the sardine harvest. Fisheries are stationed along its shores for a distance of nearly 100 miles, and they are always the centre of a fleet of boats, which are discharging their freight or preparing for the fishing-grounds. Each establishment is complete in itself, and is therefore capable of attending to the capture as rapidly as it is made. Many of these establishments employ their own men at so much per diem to tend the nets; but others purchase the salmon from those who keep their own apparatus and do not prepare their captures for the market. The usual price paid for a fish weighing from 15 lbs. to 40 lbs. is from 25 to 50 cents, a sum which seems comparatively small, yet in the aggregate it becomes quite large, as it is no uncommon event for a party of four to seine from 300 to 2,000 fish during the day or night. At the former figure the men would average 15 dollars each per day, while the latter would yield them a very handsome return for their labour and the capital invested. Many who do not use nets construct weirs along the most prominent points of the shore, and manage to do well, their catch ranging from fifty to 3,000 at one time. There is an opportunity for hundreds of men with a small capital to engage in this business, and the season must be dull indeed that will not enable them to clear the amount of their investment, besides paying them well for their time. While large numbers of salmon are captured in weirs, the great hauls are made with seines. The usual mode of fishing is to place the net in the stern of the boat, leaving one of the ropes attached to it with a man on shore; the boat is then pulled out into the river, the net being payed out as it progresses, until the current is reached, when it is swung round in a semicircular manner until the shore is reached again. The net is then pulled in carefully, and despoiled of its contents. Another method employed is to throw the seine in the channel which the fish generally take, and let the current bear it down the river four or five miles. It is then hauled aboard the boats, to which it is fastened by ropes, cleared of its spoils, and again thrown out. The nets used in this system are from 120 to 175 fathoms in length, two or three fathoms in width, and have meshes which measure from 6 to

8 inches diagonally, in order to prevent the capture of the small fry. These are known as gill nets, and are worked principally during the night, so that the salmon may not see them. The catch of a net ranges from 50 to 400 per night, and the average weight of those caught is about 25 lbs. each, as some go as low as 12 lbs., and others as high as 50 lbs.

During the month of June, when the annual freshet increases the volume of the Columbia, and leavens its waters with sediment, the seines are worked both day and night, the fish being unable to see them during even the brightest day. Double gangs of men are then employed, and everybody is in the highest state of activity. When a boat discharges its finny cargo at a fishery, detachments of expert Chinamen stand ready to attend to it. The fish are first counted and sorted, then handed over to the "Celestial" cutters, who chop off their heads with the greatest dexterity by means of large knives worked with a lever—on the principle of a tobacco-cleaver; another party cuts open the ventral regions and clips off the tails; a third attends to the washing of the fish, and cutting them into 1 lb. or 2 lb. pieces; while a fourth is engaged in cooking and packing them into cans. Everything moves like clockwork, and the result is seen in the large piles of packed cans which stand ready for shipment after the work of twenty-four hours. To prepare the salmon for market, a piece weighing 1 lb. or 2 lbs. is put into a can, and to this some spices and condiments are added. The can is then covered, except a small hole in the top, to allow the air to escape. It is next put into a boiler filled with boiling salt water, then into a boiler of hot fresh water; and when the fish is so thoroughly cooked that it is deemed fit to stand any climate, the can is soldered air-tight, and placed with many others until it is forwarded to market.

The amount of salmon which was prepared for shipment in 1878, along the Columbia River alone, reached about 15,000,000 lbs. in weight, and was valued at 2,500,000 dollars. Add to this the quantity prepared in other sections of Oregon and Washington Territory, and it would be safe to assert that the total value of the salmon fisheries of the North-west, including all that was barrelled and canned, reached at least 4,000,000 dollars. This, however, is not a tithe of what they would produce if capital enough were employed to fully develop them; for their limit can be measured only by the amount of capital invested. Hundreds of men and thousands of dollars could be profitably employed in working them, as there is plenty of room for all who wish to undertake the enterprise, and the whole world is at command for a market.

The next species of the *Salmonidæ* to follow its nobler brother into the streams of the North-west is the *S. paucidens*, known as the weak-toothed salmon and the "blue-back." The Indians call it the *quanich*, or second-running salmon, and use it extensively for food when it first arrives in May. The fisheries do not care to capture it, and if they do they generally use it for shipment to the Sandwich Islands, whose inhabitants prefer lean and fibry fish to the more tender and delicate. This species takes its name from its feeble and scattered teeth. It ranges from 3 lbs. to 6 lbs. in weight; but its flesh, though good, is not deemed sufficiently so to be fit for the palate of any one lighter in colour than an Indian. It presents a graceful appearance, the dorsal profile being straight, and the tail forked and unspotted. The colours are—body and back of head, a bluish-grey; belly, white.

One that bites at a hook, and seems to enjoy it too, is the *S. truncatus*, or square-tailed salmon, which arrives in the Columbia River in August, and the streams farther north a little later. When it enters Puget Sound and its adjuncts the Indians troll for it with a clam or herring bait, and capture large numbers. They also spear it in the rivers, and, near cascades, bag it heavily by means of scoop nets attached to poles measuring from 4 to 7 feet in length. I tried it with a fly once, but was unsuccessful in taking any. Some fine sport may be enjoyed with it, however, by those who prefer the less scientific bait-fishing to fly-casting, as it will not hesitate a moment to jump for worms, clams, or salmon-roe. Its average weight is about 10 lbs., and its length from 25 to 32 inches. It measures about 13 inches from the nose to the first dorsal fin, and 20 to 23 inches from the nose to the adipose dorsal fin—upper measurement; while its girth, anterior to the abdominals, would be about 16 inches. The head is small, the teeth are quite short, the tail is square, and the dorsal profile arched. The back and dorsal fins are of a light blue colour, spotted with black on the head and fins; the lower region is a silvery white, but below the lateral line it becomes dusky, and the lower fins are pale and unspotted. This species is found in the rivers as late as December, so that it spends about five months in fresh water.

The silvery-white salmon of Lewis and Clarke (*S. tsuppitch*), arrives in the rivers of the North-west in September, and remains several months. It is a good fish for the table, its flesh being firm and sweet. The Indians capture it extensively, and sell it, when fresh, to the white settlers for 25 cents each. Its characteristics comprise a small conical head, terminating in a pointed snout, having the commissure of the mouth slightly opaque, and the dorsal profile rising gradually to the origin of the first dorsal fin, declining thence to the tail, which is forked. The back of the head and body are studded with oval and circular spots, but the sides and fins, including the tail, are unspotted. The teeth are short, fine, and sharp, few on the anterior end of the vomer, but the tongue has a double row. This is not used by the fishing establishments, it being deemed too small to pay for the expense of capturing.

The *S. scouleri*, or hook-nosed salmon, frequents the streams adjacent to the ocean from September to January; but, being deemed unfit to eat, none but hungry Indians pay it any attention. Millions die from exhaustion or some other cause, and their remains lie scattered along the shore. This species might be the *S. quinnat* transformed by the labour of spawning; but what a change there is between the spring and autumn specimens! It is no wonder that they should be considered distinct species by the uninitiated, for they vary in outline, colour, and look of flesh. Instead of possessing the brilliancy which it boasts in the spring (allowing it to be the same species), the back displays only a dull leaden hue, entirely unspotted, and the belly is white.

Another species of the family, called *queachts* by the Indians (*S. Gairdneri?*), and the spring salmon by the whites, reaches the rivers as early as June. Being of excellent size, and possessed of white, delicate flesh, it is used freely for the table; but it does not enter into any commercial transactions. It ranges from 5 lbs. to 15 lbs. in weight; has a round muzzle, a short thick head, and quite a straight dorsal outline. In colour the belly is white, tail spotted dark, the back of the head and body a bluish-grey, and the sides ashy-grey. It generally moves in small schools only, and tarries in fresh water about three months.

A member of the *Salmonidæ*, called by Suckley the *S. confluentus*, and said to be the largest of the family found in Puget Sound and its tributaries, ranges in weight from 8 lbs. to 30 lbs.; but the average may be placed at about 16 lbs. It is speckled with small black blotches, and has dark scales. As it appears about the 1st of June, some persons have supposed it to be a variety of another species, the change in hue being due to the character of the water it frequents.

The most peculiarly formed member of the family is what is known in the vernacular of the country as the "hump-backed" salmon (*S. proteus*), an individual with a physiognomy as ungracious as its dorsal outline is odd. It is only a biennial visitor; but when it does come it comes with a rush, for it moves in schools so vast as to be equalled only by herring in certain seasons. It makes its appearance about the 1st of September, and crowds into every creek it meets from that time until the middle of December. As no person cares to test its flesh, it is allowed to return safe to the sea without incurring any more dangers than those encountered *en route* to the spawning-ground. Its average weight is about 10 lbs., and its colour a conglomerate of dirty brown and white. The hump which gives it so much character is the sole property of the male, and this rises from its spinal column to a height of 6 or 7 inches. Nature, in order to make its peculiar form of beauty complete, has given it a visage to correspond with the hump. This is composed of jaws, large and ugly, the upper being long enough to envelop the under, and the latter ending in a dilated knob. The teeth are massive, close, and sharp, and look much like an ivory saw. What use this species fulfils in the economy of creation, unless it is to feed the seals which always follow it, I could never conjecture.

A species called the dog salmon (*S. canis*), arrives in myriads about the 1st of September, and runs in the rivers for about three months. Not being deemed edible, it is not used by the whites, but the Indians devour it with avidity until it becomes covered with blotches, the result of disease; and even then they capture some to put in the smoke-house, for fear they might be short of food during the winter. It is thought that the majority of this variety dies in the fresh water. Even when just in from the sea the flesh is white and insipid, and certainly unsavoury. Its colours are a dingy olive on the back, merging into a brassy hue on the sides, the abdominal region being of a brownish-white. It receives its specific name from the form of the teeth, they being large, strong, and embedded in powerful jaws. This specimen may be one of the earlier species transformed by the operation of spawning, for it seems almost impossible that any member of its family should be unfit for the table when fresh from the sea, unless it is afflicted with some aquatic malady. We might, therefore, presume that it is not a distinct species, but rather some nobler salmon so changed in appearance and character by adversity as to be unrecognizable.

A species of the family that bites at a baited hook pretty freely is the so-called river salmon or mountain trout (*S. Gibsii*, Suckley), which is found very abundantly in nearly all the streams, especially those east of the Cascade Range. Its favourite *habitat* is the cool clear rivulets or shallow rivers upon whose bosom the sunlight dances. Being exceedingly game, it requires an expert angler to land it safely, for if he is not experienced he will be almost sure to get his line entangled among tree-stumps or crags. Grasshoppers and "daddy-longlegs" are the flies most generally used in capturing it, and it seems indifferent about which one is presented, for it will bite equally well at either. Its usual weight is from 3 lbs. to 8 lbs., and its length between 14 and 22 inches. The head is small; the snout rounded; the teeth are few, especially on the labials; and the profile of the body is subfusiform; the back and head are of an olive-green hue, dotted with black spots.

For angling purposes the best fishes in the North-west are the various species of salmon trout, as they bite readily at bait or fly, and are found in nearly every stream throughout the entire region. They attack vigorously, fight pluckily, and display all the strategy of their family in trying to escape; so that they are able to put the disciple of Walton on his mettle if he would land them—especially the larger sort—without entangling his line or losing his hooks. There are several members of this genus scattered throughout the country which have not been yet baptized scientifically, so any reference to them would be needless.

The finest species is, undoubtedly, the red-spotted salmon trout (*S. spectabilis*), and I doubt if this has a superior anywhere in game qualities and delicacy of flesh. In general appearance it is not unlike its Atlantic congener, but it is, of course, much larger and handsomer. The body has a rather compressed subfusiform profile, and the head is about one-fourth the length of the body. The dorsal region, tail, and upper portion of the flanks are spread over with darkish grey spots, the sides are spotted with a light red, and the ventral region is of a silvery hue. The teeth, which are strong and sharp, are much more numerous on the lower than on the upper maxilla, but if it had only one-half the number that it has on the upper jaw, it would have enough and some to spare. Being a denizen of nearly all the streams in the country that have even the most remote connection with the ocean, it affords exciting sport to the anglers scattered over an area of at least 300,000 square miles. It seems to have no very marked special preferences, for it may be found in dark and clear, tranquil and turbulent waters. Being migratory, it is not found in the rivers before the middle of May, but from that time up to the 1st of December it is abundant. The Indians capture it largely by making traps of willow wands, which they place in the streams, with the mouth facing the direction in which it is running. It is also caught with nets, and with hook and line, salmon-roe and worms being the principal baits used with the latter. It also furnishes splendid fly-fishing, and it is no unusual occurrence for a good angler to take from four to twelve dozen in a day, and not unfrequently a larger number. I have known instances in which the angler ceased catching it through mere exhaustion, for no sooner had his fly touched the water than one was attached to it.

The *S. Masonii*, which has a brownish-grey back, sides silvery grey, fins ash-grey, the dorsal and caudal spotted, and the upper portions of the head and body sprinkled with irregular darkish spots, is very common, and affords excellent fly-fishing from June to November. This species seems to love the quiet shady water beneath logs, or that near the matted shrubbery of the banks.

The Oregon brook trout (*Fario stellatus*), is another species that takes a fly readily; but it is generally caught with worms. Not being migratory, it is forthcoming at all seasons, but is in its best condition during the summer, when it weighs from ¼ lb. to 2 lbs. It is very plucky for a fish of its quiet habits, and ranks high from an epicurean standpoint, its flesh being tender yet firm, and of a delicate flavour. It is also beautifully coloured, the back being a bright olive, the belly a silvery white, and the body profusely covered with black spots having a pale centre. The head, body, and fins are densely spotted with black, and the pectoral, anal, and ventral fins have a reddish-orange tint which gives the creature a very pretty appearance.

A specimen of red trout, which is said to excel in flavour any of its family, has been found in two portions of the North-west. It has been captured thus far only in the Wallowa Valley, in Oregon, and Payette Lake, in Idaho. It bites freely at worm, roe, or fly, and will, it is said, dart at a piece of red flannel. Those who have seen it consider it a true salmon trout, but others presume it to be a species of carp, as it is said to resemble closely the gold fish of our home aquariums. If it is a true salmon, it must possess some interest for anglers and naturalists from the fact that its range is so very limited.

The last, though by no means least interesting, of the *Salmonidæ* of the North-west, is the eulachon (*Thaleicthys pacificus*), which is found from California to Alaska. This is so oily that, when dried, the Indians use it for candles. It burns readily as soon as the fire touches it, and gives a good clear light. For night fishing it is very useful, as it takes a good breeze to extinguish it, if properly dried. The Indians are the only persons who eat it, and they seem to highly enjoy its greasy flesh. Being exceedingly abundant, it would, it seems to me, pay some persons to capture it for the manufacture of oil, as that article always meets a ready sale.

This completes the list of the *Salmonidæ* of the Northern Pacific, and it will be seen that they are varied and numerous enough to furnish the angler abundance of excitement, and capital a sure means of investment, while they enrich and enlarge commerce and open a new resource to industry.

The fisheries of the Columbia give employment at present to more than 4,000 men, and nearly 500 boats; but what they will do when fully developed can only be conjectured.

Besides the different species of salmon and trout, the salt and fresh waters of Oregon teem with many varieties of excellent fish; but, with few exceptions, they are never utilized, especially the marine species. On the coast the cod, halibut, plaice, skate, herring, anchovy, smelt, perch, and several other useful fish are found in the greatest profusion, while the chub, dace, carp, sturgeon, white fish or coregonus, and many of their kindred, may be captured in every stream or lake. In fact, one of the best sources of wealth in the country is its marine fisheries; but as they receive no attention worth mentioning, their extent even is unknown. The anchovy, herring, and cod fisheries alone ought to employ a large number of men, and yield good returns for the capital invested; but thus far the Indians are the only persons who capture them in any large quantities. There are twelve species of the Crustacea in the State, and about eighty of the Mollusca; but they also remain where Nature placed them, if I except a few crabs, shrimps, and clams and oysters. The cultivation of the latter bivalve is now becoming a prominent industry in all the bays connecting with the Pacific Ocean; and as it thrives well, and is noted for its flavour, all that is shipped meets a ready sale. The Indians depend largely on clams for food, and eat them either boiled, or raw, when dried. They put them up in strings, then dry them in the sun, and these strings they take with them on all excursions, as they depend mainly upon them for food when they cannot tarry to catch fresh fish or shoot game.

Were enterprise and capital employed in the marine fisheries, I know of no part of the world where success could be better assured, and with as little delay or trouble.

CHAPTER IV.

THE CHIEF TOWNS OF OREGON.

Commerce of Portland—Oregon City and the Willamette Falls—Up the Willamette River—A German Communal settlement—Salem, the capital—Its schools and churches—The condition of education in the State—Albany and Eugene City.

MOVING northward by boat from the fisheries, I halted at Portland, the metropolis of Oregon, and the largest city on the north-west coast. This is situated on the Willamette River, twelve miles from its confluence with the Columbia River, and is distant about 125 miles from the ocean. It does not present a very attractive appearance from the water, owing to the number of old buildings and wooden warehouses that face the stream; but on landing the picture is reversed, as everything looks fresh and clean. It has a population of about 15,000, and, for its size, is probably one of the richest cities in the world, its assessable property being estimated at over 17,000,000 dollars. It has extensive commercial relations with Great Britain and Ireland, and does a fair trade with the Republics of South America, the islands of the Pacific, and several nations of the Orient. The greater portion of its foreign trade is with the former, however, as several London houses have establishments there for the purpose of dealing in grain, flour, canned salmon, hides, wool, and preserved fruits. Its annual exports exceed 17,000,000 dollars—an exhibit without a parallel for its own population and that of the State; and of this sum the British kingdom returns it about two-thirds. Including both domestic and foreign shipments, the Governor of the State estimates that the exports of wheat and flour alone amount in value to 7,000,000 dollars; of oats and other cereals to 2,000,000; of fruits to 1,000,000; of meat, hops, wool, hides, horned cattle and horses, to 3,000,000; of canned salmon and oysters to 3,000,000; of timber and coal to 2,000,000; and of gold, silver, iron, copper, and other minerals, to 2,000,000. This would make a total of 20,000,000 dollars; but as large quantities of lumber, coal, salmon, and oysters are shipped from the small harbours on the coast, the exports from Portland alone are estimated at 17,000,000 dollars only. Even this sum shows the almost fabulous wealth of the country; but what it will be when capital and population develop its resources, not even the most sanguine can predict with any degree of accuracy.

The trade with the British kingdom is kept up by a large fleet of swift-sailing iron vessels that range in capacity from 900 to 1,500 tons; but as they cannot be loaded fully at the wharfs, owing to their large draught of water, their cargoes are completed near Astoria, by means of steam lighters. The number of English ships engaged in this trade in 1874 was about 180, and the total number of vessels that cleared from the port, excluding those that plied on the coast, was estimated at 250, having an average capacity of about 250,000 tons. This number must be more than doubled in a short time, however, as the exports of wheat alone now reach about 500,000 tons per annum. The commerce of the place reflects great credit on the people, as it shows that they are both enterprising and industrious. The latter qualities are made evident by the fine mercantile establishments and warehouses which grace the city; while the general thrift of its citizens is proved by the many elegant residences of the wealthy, and the neat cottages of the poorer classes. No signs of poverty display themselves anywhere, for the lowliest labourer receives liberal wages, and is generally in regular employment. The latter is certainly a much higher individual, socially and morally, than his kindred in the Atlantic States, as he has a better opportunity for the display of his manhood, the rules of caste not being so arbitrary as they are in older countries. A great deal of attention is paid to beautifying the city, and the result is seen in the admirably kept streets, the numerous parks, that extend throughout almost its entire length from north to south, and the delicious shade afforded in summer by the broad-leaved maple, whose rich racemes of yellow flowers unite with the bloom of the honey-acacias in perfuming the air, and completing an arboreal vista difficult to be excelled even in Paris or Versailles.

The only blot on the fair face of the city is produced by the low, foul rookeries of the Chinese, who occupy a quarter between the two principal business thoroughfares. Their houses, which may be called mere huts, reek with vile odours, the product of bad ventilation, the fumes of tobacco-smoke and opium, putrefying meats, and general uncleanliness. Even their temple, or Joss House, partakes of the characteristics of the dwellings, it being a rickety, unswept and unpainted wooden structure, which is garnished in the interior with a few scraps of garish tinsel that are arranged about the gods. The latter are as unkempt as their abode, for not a vestige of paint remains on one of them, except an individual that typifies moral greatness, in a sort of Pilgrim's Progress, by leading a mule, despite its earnest protestations with legs and head, from one end of the city to another, amidst the jeers of demons or evil spirits. This individual is kept in a glass case, which accounts for his bright looks and the freshness of his tawdry apparel. The respect that the children of the Flowery Land entertain for their temple and its host of deities may be deduced from the fact that they play cards and smoke opium there. I saw a dozen vagabonds enjoying themselves there by sucking heavy brass pipes filled with this deadly narcotic, and judging from their vacant, glassy eyes, wrinkled, parchment-like skin, and ghoulish appearance, they were long its votaries. A more wretched picture of depraved humanity cannot be seen anywhere than that presented by the slaves who are enchained by this drug.

The Chinese temple is in sorry contrast to the Christian churches so numerous there; but while none of the latter present any striking architectural appearance, yet all are solid and commodious. The proudest structures in the city are the public schools, which are large, well furnished, and admirably adapted to their purpose. Educational institutions are the pride of the people, a fact which is well attested by the number of academies for both sexes which are sustained by the leading religious denominations. Society in Portland is cosmopolitan in its fullest sense, and though there may be political and religious distinctions, yet the feeling of opposition between the sects, which exists in older localities, is unknown. Even feelings of nationalism are obliterated, a fact which may be ascertained at any large gathering. Every man there is taken on his merits alone, and he need never fear being taunted with his origin or nationality if he only proves himself the possessor of a virile manhood. Democracy is the ruling social principle, on the very natural ground that the most exalted there have risen from obscurity by their own efforts, and, being known to all the old inhabitants, any assumption of stilted pretence would make them a target for ridicule. The people, as a body, are much more cold and sedate than those of California, and also lack their electrical buoyancy. This frigidity must be the result of climate, as both classes are composed of the same material; yet while those of the more southern region are easily aroused and prompt to undertake any financial scheme that promises the most shadowy results, their northern kindred rarely yield to excitement, and indulge in no speculations that do not give an emphatic indication of success. This characteristic has given them a name for steadiness and forethought; hence they occupy an exalted position in the commercial world.

The city has excellent means of communication with all the important points in the interior, and such on the coast as it trades with. A fine line of handsomely equipped steamers runs to San Francisco, and another to Puget Sound, British Columbia, and Alaska. Two railway lines penetrate the Willamette Valley, one branch, the eastern, being fifty miles long, and the western 200. The latter is expected to connect with the California Railroad ere long, and the former is to be carried as far as Astoria, the best harbour on the Columbia, at an early day. Some other railway schemes are in progress, and when they are finished the country will have all the facilities needed for getting its products promptly to market. Two steamboat companies, the Oregon Steam Navigation Company and the Willamette Transportation Company, keep communication open on the two great rivers of the State by means of large fleets of swift steamers, whose cabins are furnished with the elegance of a drawing-room. Owing to the narrowness of the river in some places, several of the boats carry only one wheel, and that being placed in the stern gives the craft a rather quaint appearance on first sight.

Portland being the centre from which travel radiates, I took passage there on board one of the stern-wheelers for a trip up the Willamette River. This noble stream, which has a total length of about 300 miles from north to south, is the great water highway of the valley whose name it bears, and is of almost incalculable value to its prosperity. It traverses that valley for a distance of 155 miles, and is navigable for light steamers during the summer months to a thriving town called Eugene City, about 126 miles from Portland. It receives in its course the waters of ten rivers, which have an average length of sixty miles each; but of these only three, the Yamhill, Santiam, and Tualitan, can be traversed by steamboats.

In moving up the river our craft was hemmed in on every side by the omnipresent firs; but their gloomy hue was relieved very frequently by the numerous islets in the river, which were covered with a profuse growth of deciduous trees, tangled shrubbery, and masses of brilliant wild flowers. The snowy peaks of the Cascade Range were also visible, and high above all others, the famous Mount Hood, whose crest is visible every fine day from Portland, it being only sixty or seventy miles distant. After a run of fifteen miles the boat stopped at Oregon City, a town containing a population of 1,000, and locally noted for its large flour mills and its manufactories of wooden ware. It was interesting to me, however, in one way only, and that was for the beautiful cascades that gave it water power enough to turn a thousand mills within almost as close a space as they could be packed. These are called the Willamette Falls, and as a specimen of cascades produced by the wearing away or obstructions of basaltic rocks are the best I have seen anywhere, as they display all the erratic outlines of trappean formations. Extending from one bank of the river to the other, a distance of 300 yards, they present a grand view in early summer, as they bear onward an immense mass of water produced by the melting snows of the mountains, and this, through its initial momentum, is hurled into the chasm, 40 feet below, with such a tremendous force that the spray is sent sailing upward in dense showers to a height of many feet.

Since the construction of a ship canal around them, to allow steamers to pass up the river, they have worn new channels in the dark basaltic islands which loom up in their course in several places, and have thus made their forms more picturesque. The general outline of the main falls is concave, or like the inner side of a horse-shoe, two ranges of crags forming the extension specified, and the final impediments on the sides. Being surrounded by walls of sooty trap and the bluish-green forests, they seem higher and whiter than they actually are. As it takes the steamers plying on the river half an hour to pass through the canal, the tourist pressed for time will find this interval amply sufficient to enable him to appreciate their beauties, and, if gazing on them from above, to enjoy the novel sensation of having his head made dizzy by their boisterous, whirling motion. If he has leisure, and is fond of angling, he can indulge to satiety in his alluring propensity from April to September, as the river is then so thronged with salmon that they crowd each other ashore, or destroy themselves in trying to drag their wearied bodies over the rocky shoals. Few sights are more interesting than to behold thousands of these active creatures launching themselves into the air in their blind efforts to scale the falls, but these efforts result only in their own destruction.

Proceeding southward from the falls, the boat was soon deep amidst a forest so dense that it gave the river the appearance of a small lake, for look in any direction and nothing met the eye but gigantic firs and masses of matted undergrowth. The stream spread out in some places to a width of 200 or 300 yards, and in others contracted to a space of a few feet, just large enough to allow the boat to pass through the banks without any greater impediment than brushing her sides with the extended or pendent branches of the trees. Small islands, robed in garbs of light foliage, were met quite frequently, and did much to add to the pictorial effect of the scene by their contrast with the hue of the mainland. During the passage up no signs of man were met with for a distance of several miles, notwithstanding that the surrounding country was heavily populated, and when we did meet them they consisted merely of a primitive ferry-boat and some dug-outs and canoes. The silence even that reigned all round was so deep as to seem droning, but this was broken at long intervals by the scream of a wild cat, the whistle of a deer, or the mellow tones of a cow's horn, which some Nimrod was sounding to recall stray hounds. We saw in one place a large black bear swimming across the stream, but ere the passengers could approach near enough to get a shot at him with their revolvers, he disappeared in the woods with a speed that would indicate that he had forgotten something there and was in a hurry to get it. Wild ducks were exceedingly numerous, and their alarmed squawk, as they fled in frightened hordes, awoke the resonant echoes of the forest. The trip was exceedingly interesting to me, owing to the luxuriance of the woods, the panorama presented by the oft-curving banks, the primeval character of the country, and, above all, by that feeling of pleasant strangeness which one enjoys in passing through new scenes in which wood and water are so combined as to form a picture expressive of tropical exuberance and softened wildness. After running up as far as the head of navigation, I returned overland by rail, and made my first tarry at a little village, twenty-nine miles from Portland, called Aurora.

This place is owned by a colony of Germans, who dwell together on the communal system, all working for the common good. They are as enterprising and thrifty a body of settlers as can be found anywhere, and are, above all other things, sober and intelligent. They are entirely independent of the outside world for a means of livelihood, as they raise their own crops, make their own clothing, and manufacture such articles as they may need in mechanical and agricultural pursuits. Flour and lumber mills, harness, saddlery, and cabinet shops are in active operation, and all surplus products that they do not need are shipped to the metropolis. They are governed by a patriarch, who is priest, physician, and sage; one whose kindly laws are obeyed with scrupulous exactitude. They have their own church and school, which are well attended, and their evenings are often enlivened by the strains of an efficient and well-organized brass band. This band gives concerts in the open air during the summer, and as its reputation is high, many persons make excursions to the village to listen to its dulcet tones. Besides its music, the place is also rendered very interesting by the large park which it boasts, and the great taste displayed in its ornamentation, it being nearly one mass of verdure and brilliant flowers, while gravelled walks afford an opportunity for promenading. This community seems to be an ideal one, if appearances are not deceptive, for thrift, comfort, and placid contentment are visible everywhere. One peculiarity of the feminine portion is the sober apparel worn, and the apparent attachment of all its members to one another. Leaving here, a run of twenty-four miles by rail brought me to Salem, the second city in size and wealth, and the capital of the State. This is situated on the Willamette River, and is fifty-three miles from Portland by rail. It is one of the most picturesquely located cities in Oregon, being surrounded by splendid prairies, charming coppices of foliaceous and coniferous trees, and several leaf-embowered streams.

The present population is estimated at about 5,000, and the assessable property at nearly 6,000,000 dollars. This is the Athens of Oregon, as it boasts more churches, schools, and academies than probably any city of its size in the world. There are eleven of the former—a proof, evidently, that the people are very moral—five public schools, several private ones, a school for the blind and the deaf and dumb, an academy for girls, owned by the Catholics, and a higher-sounding one, called the Willamette University, which is open to both sexes, and controlled by the Methodists. The latter is empowered to grant degrees in medicine, science, and general literature; and though these may not be deemed so reliable as those issued by better-known institutions, yet they are entitled to really more importance than may be conceded to them, as the university has an excellent faculty and a large *corps* of teachers. It may be convenient here to add a word about the educational establishments of the State, so that inquirers may see at a glance what has been done for the rising generation. According to the census of 1870, Oregon then had 637 public and private schools, attended by nearly 33,000 children. Of these, 3 were recognized as universities, 6 as colleges, 10 as academies, and 594 as public schools; and of the latter, 4 were distinguished as high, and 31 as graded schools. The cost to support the public schools in 1876 was about 30,000 dollars, and the public school property was valued at 460,000 dollars. Of the universities, one is a State institution, and is located at Eugene City; another is the one mentioned above; and the third, at Forest Grove, is owned and controlled by the Congregationalists. The most important institution belonging to the State, except the university, is the Agricultural College, where instructions are given in the most scientific method of farming, besides a good general education. The public schools are supported by a tax, and by the interest on the money obtained by the gradual sale of 500,000 acres of land, and the college and university by the funds produced by the sale of lands with which they have been endowed by the Federal Government. It is evident, therefore, that Oregon is doing as much for education as any country on the continent, and that it is deficient in no facilities for the moral and intellectual enlightenment of its inhabitants. The manufacturing establishments of Salem are a large source of wealth, their manufactured goods amounting to over half a million dollars per annum. These consist principally of lumber, woollen goods, flour, agricultural implements, iron and brass castings, furniture, linseed oil, and materials for house-building.

The city can boast of some handsome public buildings, the most important being the Legislative Chambers, an opera house, and the penitentiary. The former are equal to those belonging to much wealthier commonwealths, and are a great credit to the people. One of the most interesting features about them is the ornamental native woods with which the rooms are panelled. Prominent among these is the Oregon white maple, which is capable of receiving a very high polish, while the curling and ramification of its veins impart to it a character for beauty which cannot be excelled by any known wood. The supports of the banisters of the main staircase are made of the gigantic sequoias of California, and grandly they sustain the looks of the noble dome which towers above them to a height of 108 feet.

The difference between this palatial edifice and the quarters in which the legislative sessions were held a few years ago denotes a marked advance in the wealth and population of the country. The Solons of the State then occupied two rooms over a shop; but small and inconvenient as they were, they were deemed ample enough for the transaction of business until the people could afford superior accommodations. No better idea of the character of those elected to the Legislature and to the executive chair can be given, than to state that the former gave several months of their time to the advancement of the country for the paltry sum of 3 dollars per day, and that the Governor was content with a salary of 1,500 dollars per annum, yet devoted all his time to his official duties. No State in the Union has been more economically governed than Oregon, and the result is now seen in its comparative freedom from debt and the very light taxes imposed. No county or city can assume a debt of more than 50,000 dollars, and then, I believe, the Legislature must first grant permission. I witnessed a session of the Legislature, and I do not remember seeing in any public assembly a more practical, unpretentious body of men. Business was paramount with them, oratorical displays being left entirely for mere political contests. On the last night of the session, when the official work of the season was over, the sages gave vent to their sense of humour, and all was enthusiastic hilarity. A witty member of the "Third House"—that is, one who belongs to the axe-grinding lobby—was elected to the chair previously occupied by the Speaker, and he was overwhelmed with questions bearing upon all imaginable topics. The most absurd resolutions were introduced with the greatest gravity, and debated in a farcically violent manner, innuendoes and personalities being used with the utmost freedom. Whenever the strictures were timely, unusually witty, or very severe, the object of attack or some would-be friend would appeal to the chair to know if such personalities could be permitted in such an august assemblage, and that wooden authority would refer to an old almanack or a Patent Office report for instructions, and would read from them an extract about the weather, the advantages of a new bolt, or some facts about carrots or onions, and would then decide that all attacks of a personal nature were allowed until the assailed party "treated" the House; and this fun was kept up till near midnight, when it was stopped by the entrance of a small page bearing a message from the Governor, announcing the close of the session. Many regretted the arrival of that small boy, but there was no help for it, so the hilarious statesmen and their adherents had to adjourn to more social quarters to continue their mirth. Such scenes might not be considered very dignified, yet they were typical of the democratic nature of those hardy pioneers, who did not consider that frigid formalism by any means denoted wisdom.

From Salem I went to Albany, twenty-three miles distant. This town has a population of 2,000, several churches, a select and a public school, and a college. It boasts lumbering, flour, and planing mills, two breweries, a foundry, and furniture and carriage manufactories; it has, in fact, all the enterprise of a town with ten times its number of inhabitants. Being the centre of the Willamette Valley, it ships more wheat and flour to Portland than any town in the western division. It possesses excellent water power for running mills and manufacturing establishments, and being convenient to a gold-mining region, is as prosperous a small city as one would be apt to meet on the continent.

South of this, along the railroad, are several towns, engaged in lumbering or in the manufacture of woollen goods. The latter bear a high name throughout the United States for their fineness and density, and are therefore eagerly sought in the eastern markets, where they realize the highest prices. The most important of these towns is Eugene City, which has a population of 2,000, contains the State university, and boasts of several manufacturing industries. It is environed by charming scenery, prominent in which are two pinnacle-like bodies of earth, called *buttes*, which rise abruptly from the plain to an altitude of from 300 to 1,700 feet. Having a large circumference, and sloping gradually to the top, they are easy of ascent, and once on their summit, the spectator has a magnificent view of the Willamette Valley, which stretches out before him like a map. If one would obtain a correct idea of the country, he should ascend one of these peaks, and he will find that his time and labour are amply repaid by the extensive panorama that gradually unfolds itself to his vision.

CHAPTER V.

THE WILLAMETTE VALLEY.

Its beauties, climate, and resources—Extraordinary abundance of wild fruit—Arboreal botany of the region—The principal snow peaks—Grand mountain scenery.

AN optical survey of the Willamette Valley from the summit of one of the numerous spurs that extend outwards from the higher mountains, reveals as grand a view of woods and waters, rolling prairies and towering snow peaks, as can be found on the American continent. In pictorial effect it resembles an ideal landscape rather than the practical work of nature. There is scarcely a sentiment of beauty in the human heart that it does not arouse, and there is not a human soul higher in feeling than the wild beast that would not be awakened to its varied charms, for he may find there in close contrast tranquillity and energy, action and repose, enchanting picturesqueness and sublime grandeur. There is no dull tameness to produce indifference, no bare, chilling crags to awaken feelings of desolation, and no crumbling ruins to recall regretful memories of the past; hence the vision it reveals is one of virgin freshness, tropical luxuriance, and awe-inspiring majesty, for everything seems to be formed on the grandest scale.

The valley proper has an area of 3,000,000 acres, and by including the lower foot hills, of 5,000,000. It is hemmed in on the east by the Cascade Range, which runs through the State from one end to the other; on the west by the Coast Range; on the north by the Columbia River; and on the south by the Calapooia Mountains. The Cascades are the highest mountains in the country, having an altitude varying from 8,000 to over 14,000 feet. Their crests are constantly covered with snow, and their sides are densely clad with trees as far as the snow line, which is estimated to commence at a height of 6,000 feet. The principal peaks are Mounts Hood, Jefferson, Three Sisters, Diamond Peak, Thielsen, Scott, and McLaughlin or Pit. The former is monarch of all, having an elevation of 11,225 feet, and being visible from the ocean to almost the farthest limits of the State. All these peaks can be seen from an elevated position in the valley on a fine day, and several are always in view, except when hidden by clouds, as they range from 8,000 to 11,000 feet in height. They make a grand background for the gentle valley, and give it an air of dignity it could not otherwise possess. The Coast Range, which is also heavily wooded, has an altitude varying from 2,000 to 5,000 feet, and while it lacks the grandeur of its nobler brother, yet it is thoroughly in harmony with the landscape, as it has that active appearance which imparts motion to a scene. The valley which these two chains environ has an altitude above the sea of from 200 to 700 feet. Its substratum is composed of basalt, in columnar form; this is overlaid by a greyish-brown clay, with which is mixed silicose pebbles, often coloured with oxide of iron; and above all is a siliceous gravel or powdered trap. The soil varies very much in several sections close together; thus, while one part may be a rich alluvial deposit, another adjoining it may be a hard indurated clay, much less valuable for the production of crops.

One of the great features of the region is its numerous rivers, which take their rise in the mountain chains, and after traversing it in an irregular course from east to west, empty into the Willamette River, which bears the accumulation of all to the Columbia, whence it finds its way to the sea. These rivers have an aggregate length of about 1,200 miles, and water an area larger than some European kingdoms. The valley having a natural slope from the mountains to its principal stream, is well drained, and this prevents the crops from being destroyed by either floods or drought. Its fertility is so great that it has been called the garden of Oregon; and the title is well bestowed, as it produces nearly all the cereals, roots, and fruits of the temperate zone in the greatest abundance. It is bountifully wooded with some of the finest trees in the world, the most important being the firs, spruces, pines, cedars, yews, cypresses, cornels, maples, chestnuts, oaks, willows, and cedars, the birch, hemlock, hazel, arbutus, and bearberry, and several other varieties which form the higher undergrowth. Some of the counties forming the valley have from 8 to 77 per cent. of their area covered with valuable timber; but taking the region as a total, and its percentage of woodland might be estimated at 34 per cent. Every bit of timber in the country is useful for manufacturing purposes, or for ship or house-building. The finest and most highly finished furniture in the world is made from the broad-leaved maple peculiar to North-western America; and so highly is this prized, that wealthy persons pay very large sums for complete bed-room sets, while it is also in active demand for panels for drawing-rooms and important public buildings. There is only one species of oak in Oregon, and that is the *Quercus garryani*, whose *habitat* is confined to the region between the Coast and Cascade Ranges. It is quite abundant in the more southerly section of the State, and forms groves by itself quite frequently. It attains a height of from 30 to 50 feet, a diameter of 2 feet, and branches low like an apple-tree, so that a coppice resembles an orchard at a distance.

The vine maple *(Acer circinatum)*, so called from the fact that several trunks spring from the same root, and that the tops arch over until they reach the ground, where they take root again, and so keep on multiplying until they make a small forest in themselves, is very abundant near the sea-coast, as it requires a large amount of moisture. It forms a serious obstacle to rapid travelling in the heavy woods, owing to its spreading characteristics and its twisted and tangled trunks and branches. The wood being hard and fine in grain, and of heavy specific gravity, is useful for the manufacture of many domestic articles. It is the only tree in the country whose leaves turn scarlet in autumn, and this gives it an agreeable individuality among botanists and lovers of arborescence, who forget its obstructive character in its brilliancy. The bright cornels or dogwoods are also quite common in the dense forest, and do much to relieve its gloomy hue with their beautiful branches of white flowers. The country has, in fact, such an abundance of woods that it will require many a generation to exhaust them.

Of the products of Western Oregon, cereals occupy the highest position, and the most important of these is wheat. This has such a fame throughout the United States and the British kingdom for its density and good quality that it is eagerly sought by bakers. The fulness of the grain may be inferred from the fact that a bushel weighs from 60 to 69 lbs., whereas good English wheat weighs only 61 lbs. to the same measurement. The fertility of the soil is proved by its large yield, it being no uncommon occurrence to gather from 30 to 80 bushels from an acre. Owing to the indifferent system of cultivation employed by the farmers, however, and the fact that they do not manure their land, plough deeply, or rotate the crops, the average yield does not exceed 20 bushels, and some soils rate lower than this. This valley alone ought to produce an average of 60,000,000 bushels of wheat per annum, one year with another, if it were properly cultivated; but until farmers learn that they must do something more than "tickle" the ground to reap large crops, a tithe of its productive power cannot be utilized. Even with the bad system of farming employed there, the State occupies the first rank as a wheat-producing region, being excelled only by a few of the Territories—that is, those divisions which have not yet a population large enough to be formed into States. The two most popular varieties sown are the spring and winter wheat, but the quantity of the latter planted does not amount to one-half the first. One great advantage of the country is its immunity from droughts, rust, smut, or the attacks of the weevil.

There has not been a failure of the crops since Oregon was settled, and on one occasion only was the grain attacked by rust, and that was in 1870; but even then the plague was confined to a small tract. I never saw a puny shrivelled field of wheat there, and though one was seen occasionally, which proved that it had been badly cultivated, yet the stalks had an appearance of strength, and the grains a fulness that would have delighted a practical agriculturist. One cause for the excellence of the wheat, excluding the fertility of the soil, is due to the abundant moisture of the winter months, which penetrates far into the ground, and the warm, cloudless days of summer, which enable it to drink in plenty of sunshine. Very little rain falls during the summer, and as destructive storms of wind or hail are unknown, it has no enemy to check its arrival at the fullest maturity. So tenacious is it of life, and so rich is the soil, that fields allowed to lie fallow for one season produce what is called a "volunteer" crop the next year, which yields from 10 to 15 bushels per acre. Oats rank next to wheat in profusion, and excel it in productiveness, the yield ranging from 40 to 115 bushels per acre, according to the manner in which it is cultivated. The average may be estimated, however, at 35 bushels. Barley grows much better than in California, it being no unusual occurrence to gather from 60 to 100 bushels per acre; but the average may be placed at 30 bushels. Rye is but little cultivated, there being scarcely any demand for it; its average may be estimated at 23 bushels per acre. Buckwheat grows luxuriantly, and as for potatoes, carrots, peas and beans, cabbages, onions, and kindred products, they attain a size and flavour unknown in the Atlantic States, and a profusion almost impossible to believe; yet seeing is believing, and I have myself seen 20,000 lbs. of cabbages, 700 bushels of onions, and a ton of carrots gathered from three acres of beaver land. The whole region could not, of course, produce such a yield per acre on an average, yet the case to which I refer is by no means exceptional.

Western Oregon also produces tobacco, excellent hops, the choicest flax—this grows wild in some quarters—and can produce sorghum. The country is noted for the luxuriance of its grasses, which clamber from the lowliest vale up to the snow-line of the mountains, and thus afford a pasturage unsurpassed to horned cattle, sheep, and horses, as they are almost persistent, owing to the warm rains which fall during the winter and keep them green and nutritious. As a hay-producing region it is excelled by only two States, its average yield reaching nearly 2 tons per acre.

The *Pomona* of Oregon take rank with the cereals, they being noted for their size, delicacy, and flavour. The apple-tree produces the second year after being planted, or grafted, whereas in New England it requires from four to six years longer. Its fruit is also superior in taste to its eastern congener, and as it is hardly ever attacked by disease or worms, it may be said to be the chief of the *malus* family. The only instance remembered by the oldest inhabitant in which caterpillars attacked apple-trees was in 1854, and then their range was exceedingly limited.

Although trees bear there earlier than in the Atlantic States, they also decay more rapidly, owing to the size and abundance of their crops, which exhaust them at a very early age, unless they are carefully pruned. The trees begin to put forth shoots in February, and are more advanced in March than those east of the Rocky Mountains in May; hence, having a long summer before them in which to ripen the fruit, and not being liable to any disease, so far as at present known, their products attain a density, juiciness, and flavour perhaps unexcelled, if equalled, by the apples of any portion of the world. I have seen several hundred bushels gathered in one orchard, which averaged 12 oz. in weight, while many weighed 4 lbs.

The apples are largely made into cider, or given to hogs, as a market for them is very limited, and they are so abundant that they could only realize enough perhaps to pay for shipping them. A means has lately been discovered, however, which promises to make the *Pomona* of Oregon of high commercial value in the future. This is to dry and can them, so that they may be able to stand any climate. Even vegetables and meat are now canned, and as they are equally fresh in the torrid and tropical regions, they are used largely by vessels. The most ingenious method of preserving the fruits, and thus far the most satisfactory, is to evaporate the water from the juices, compressing the residue into thin sheets, which contain all the essential elements of the fruit itself, and rolling it up into bundles, like cloth. These rolls remain unchanged under every atmospheric condition, and when needed for use, all that is necessary is to place them in water, when they assume their original state. I saw several varieties of condensed juices in the Oregon department at the Philadelphia Exhibition of 1876, and was quite struck with the compressed cakes of cider, jellies, and even butter, shown there. They received a prize medal for their "novelty, utility, and well-preserved flavour." When a traveller wants a refreshing drink of cider there now, all he has to do is to put a cake of solidified apple-juice into a certain quantity of water, and in less than a minute he has a refreshing beverage at his disposal.

The pear thrives equally as well as the apple, has an excellent flavour, despite its great size, and being free from blight and the attacks of worms, grows profusely. Peaches do not flourish except in shaded, sunny nooks, owing to the humidity of the climate, but in the more southerly section they reach a high order of perfection. The plum grows wild all over the region, a proof of its being at home there; one is therefore not surprised to learn that it is noted for its size, flavour, and abundance. The cultivation of prunes is one of the best paying industries in the country, as all raised are eagerly sought by purchasers, who dry them for market. The portions of the United States adapted to the growth of this fruit are very limited; hence the high price it commands. Many persons are now devoting their attention to its cultivation, as it requires little capital, and watchfulness and care rather than labour. Land along the foothills, where it thrives admirably, can be obtained at a mere nominal sum, perhaps 2 dollars, or less, per acre; and as there is little danger of having the markets over-stocked with it, thousands could engage in its cultivation with profit to themselves and benefit to the people at large.

The cherry also grows wild, but it has a tart taste. The cultivated varieties are delicious, however, and are excelled by none on the continent. They are now receiving a fair share of attention, as they yield abundantly, and the tree produces the third year after being planted or grafted, whereas it would require from four to seven years in the Atlantic States to attain strength enough to bear.

The wild grape is also indigenous; but grapes, as a rule, do not thrive in the Willamette Valley, owing to its temperate climate. South of it, however, they grow luxuriantly, and produce a good class of wine. The Rogue River valley is the favourite *habitat* of the berry, and so plentiful is it there that nearly every family keeps its own wine cellar. The smaller berries, such as gooseberries, raspberries, blackberries, currants, and many indigenous varieties, form almost the whole of the low undergrowth of the forests over an area of nearly 40,000 square miles. They are so profuse, in fact, as to be incalculable; yet, except the few gathered by Indians and some farmers, no effort has been made to utilize them. Were they made into preserves or canned, they ought to meet a ready sale, as they would be exceedingly useful as anti-scorbutics for ships, while they would prove a most welcome addition to the tables of the poor in Europe, who cannot afford to pay the high price charged for fruit there. Besides the small fruits mentioned above, there are several other varieties which are unknown beyond the North-west, and the flavour of some is as excellent as it is unusual. These are known in the vernacular of the country as the salmonberry (*Rubus spectabilis*); the thimbleberry (*Rubus nutkanus*); cranberry (*Vaccinum macrocarpum*); the blueberry (*V. Pennsylvanicum*); the shadberry (*Amelanchier Canadensis*); the Oregon grape (*Berberis aquifolium*); and the crowberry (*Empetrium nigrum*), besides some others of less importance. Their varied colours and blossoms give the woods a most brilliant appearance, and recall tropical luxuriance in the most marked manner.

The climate of Western Oregon is nearly of the same character throughout its entire length, with this exception, that more rain falls in the coast region and the Willamette Valley than in the sections farther south, such as the Umpqua and Rogue River Valleys, and that the summers of the latter are longer and hotter, and the winters shorter and milder than they are farther north. Taking the Government meteorological tables as a guide, we find that the average temperature of the Willamette Valley is—Spring, 52° 19′; summer, 67° 13′; autumn, 53° 41′; winter, 39° 27′; yearly mean, 53°. In the more northerly quarter the thermometer sometimes goes as low as

20° in winter, and as high as 95° in summer. Snow falls occasionally, but the quantity is very light, and it remains on the ground only a few hours, or a few days at most. Ice is sometimes thick enough to be cut for use, but the occasions are very rare, for in the majority of cases it is not even strong enough to afford skating.

The climate of the region is, in reality, confined to two seasons, the wet and the dry, the former commencing late in November and lasting until April, and the latter commencing about the middle of April and lasting until November. The annual rainfall in the valley amounts to about 46 inches, and the snowfall to 3 inches. The rainfall in the coast region averages 62 inches, but the snowfall is lighter, and ice never forms to any greater depth than a very thin layer. January is the coldest month, March is the rainiest, and July is the hottest. The temperature in the coldest months ranges from 24° to 53°, and in the hottest from 46° to 90°. Any variations from these are very unusual, and might be called phenomenal. The number of rainy days in the year—that is, days in which some rain falls—varies from 95 to 118, and the snowy days from three to ten, the average being about five. The highest number of days in any one month in which rain falls is seventeen, and the lowest one and a fraction. Very little rain falls in the ripening months of June, July, and August, and only a trifling quantity up to the middle of November. In December, January, and February, however, the number of days in which some rain falls varies from ten to fourteen, but in May it decreases to eight, and in June to four. The greater portion of the rain falls at night, hence the days are often sunny, but it is a frequent occurrence to have the sky cloudy and murky, even though no rain falls. Storms of wind and hail are not known, and thunder and lightning are very rare phenomena indeed. I doubt if there is a lightning-rod on any house in the whole of Western Oregon, for the very good reason that it would be useless. This equability of climate is due to the warm currents, called the *Kuro siwo,* which commence flowing from the Sea of Japan early in November, and reaching the coast of Alaska, spread into two branches, one keeping to the north of that peninsula, and the other flowing to the south and following the shores of the Pacific Ocean. It is this heated current of water, with its accompanying thermal current of air, that operates in mitigating what would otherwise be, from its northern latitude, an extremely rigorous climate. As the current of air flows southward it encounters the colder atmosphere of the region, and this causes the moisture it contains to descend in warm copious showers. Its course to the interior being checked, first by the Coast Range, which has an average altitude of less than 3,000 feet, a large portion of the moisture falls in the valleys; but the towering Cascade Range acts as a barrier against its eastern progress, and allows only a small portion to fall on the high plateaus beyond it, hence the great difference between the climate of the two divisions which this chain traverses. That the rain is of a very pleasant temperature is evident by the number of flowers that bloom throughout the winter, the perennial freshness of the *gramineæ,* and the fact that garden vegetables from the Umpqua Valley are for sale as early as February. Cattle can roam about unattended during the winter, and, unless the season is unusually severe, receive little food except what they pick up. The summers are never hot, owing to the breezes from the ocean and the gentle currents that blow from the snow peaks of the Cascade Range, and fan the air to a delicious coolness. No matter how warm the days may be, the nights are always agreeably pleasant —so pleasantly cold, in fact, that a person needs blankets on the bed to sleep comfortably.

The general equability of the climate may be readily deduced from the fact that there are only 28° difference between summer and winter in the coldest part of the valley, while it is much less in the more southern sections, and runs as low as 13° on the coast. The result of this geniality is that farmers can plough all winter, if they wish, and in summer and autumn leave their crops in the field until such time as they may need them, as there is little danger that they will be injured by rain or storms of any kind. Persons in quest of a home, and with only a small sum at command, cannot settle in this valley very conveniently, as land is worth from 5 to 50 dollars per acre, if I except the low, sloping foothills, which can be bought for sums varying from 1 to 5 dollars. These are very fertile, and as they are well watered and wooded they would make capital orchards, or ranges for sheep, horned cattle, and horses.

The Willamette Valley contains two-thirds of the population of the State, and boasts of nearly 100 hamlets, villages, towns, and cities. Its farming classes are some of the richest in the United States, and those not wealthy are at least comfortable. Being, to a certain extent, closed at present against those who wish to engage in farming, but whose purse is too light to purchase improved land, the latter have no resource left, if they would live there, but to buy wild lands from the railway or road companies, and these they can obtain at from 2 to 5 dollars per acre on part payment of their value. It offers a good field to capitalists, however, as it is rich in such minerals as gold, silver, iron, copper, and galena, while some enterprising individual might find there a "cure-all" in one of its numerous medicinal springs.

CHAPTER VI.

SAUNTERINGS THROUGH SOUTHERN OREGON.

Among the Umpqua glens—A Protean companion—The Great Canyon—Legend of Grave Creek—A wild country—The Rogue River Valley—Jacksonville—Expedition to a remarkable lake and a fine waterfall—Tropical trees and hot springs—Abundance of wild animals and absence of injurious insects and reptiles.

DIRECTLY south of the Williamette lies the Umpqua Valley, both sections being separated by the Calapooia Mountains, which are about 2,000 feet high. The latter differs radically from the former in physical outline, it being a series of abruptly elevated small hills or knolls, and narrow valleys, instead of a rolling prairie. The elevations are covered with evergreens and oaks, and being well drained and sheltered, are used specially for pasturage. The entire valley has an area of 4,950 square miles, and of this area over 1,000,000 acres, or about one-third, are a deep, arable soil, capable of producing cereals, fruits, and esculents. That which produces the cereals in most abundance is a rich siliceous and calcareous mixture; but the best for the growth of tobacco, maize, peaches, grapes, melons, and kindred products, is the heavy alluvial deposit found along creeks and rivers. This region is better adapted to the production of fruit than that farther north, as it has a more sunny climate, and the summers are longer and warmer. It is also a more congenial home for sheep, which prefer high, dry, rolling upland to level plains; hence we find every hillock covered with large flocks of the ever-restless *ovidæ*. As very little snow falls there during the winter, these animals find plenty of herbage during the coldest season, and this relieves their owners of all trouble about their welfare. The geniality of the winter is proved by the fact that roses grow throughout the year, that garden vegetables are cut in February, and that the groves of myrtle, rhododendron, and laurel perfume the atmosphere in March.

The minerals found there include gold, silver, copper, iron, coal, limestone, and salt. Sulphur and saliferous springs are numerous, but like the minerals, except gold, they are not utilized. The principal river is the Umpqua, which flows through the valley, and empties into the Pacific Ocean at a distance of 200 miles from its source in the Cascade Range. It is navigable for vessels of light draught for twenty-six miles from the sea, and for steamers about sixty miles; but as it has great velocity, strong currents, and many shoals, the latter do not run the entire length. Some excellent land adjoins it, but owing to the sparseness of population it is largely unoccupied. The Oregon and California Railway runs through the valley as far as Roseburg, which is 200 miles from Portland; south of that all travel is by horse, waggon, or stage.

Roseburg has a population of 800, and being the market town for a large tract of country does an extensive business, especially in wool, about half a million pounds changing hands there annually. I took the stage here for what is known as Southern Oregon, my only companions being a tall, lank, frowsy, red-headed man, and a rather prepossessing young lady who was returning home from a boarding school in California. When the diligence rattled off from the post-office the red-headed man began to rattle away also with his tongue, plying all sorts of idle questions with a persistency that no frigidity and indifference could suppress. He was evidently determined to know my past and future, my present business, my religious convictions, and my hopes of a life hereafter. He would not understand sneers, and when he was at length told that he was impertinent, he retaliated by saying that some people were not polite enough to answer civil questions. He became so much of a nuisance at length, that I retired from his company, and took a seat beside the driver outside. When I retreated he commenced on the young lady, and judging from her looks, by the time she reached her destination she must have been nearly talked to death. As the driver seemed to know the garrulous individual, I asked him who he was, and received as an answer a tale that took half an hour to relate. Summarized into a brief space, it was, that he had formerly been a horse thief, but that having "got religion," he became one of the greatest shouters at all camp meetings, and finally developed into a full-fledged minister of the Methodist denomination. He exercised his vocation as an itinerant preacher among the backwoods people for two years, when he plunged himself into trouble by forgetting his ministerial functions in the violent and unwelcome lover. His erotic feelings nearly cost him his life, for if he had not shown a good burst of speed an indignant farmer of his own denomination would have buried him without the consolation of the Church. His feelings were so outraged at this treatment that he quitted the faith which he had so loudly proclaimed, and became a Universalist.

While preaching his new creed to a party of farmers in the woods one Sunday, he was recognized by a hunter passing by as one who had stolen some cattle from him while he was a pretended minister of the Gospel, and his indignation was so great at the sight of this new apostle of morality that he pointed his rifle at him, and told him that if he did not get off the barrel on which he was standing, and show his coat-tails in the distance within the space of one minute, he would receive its contents. The hint was taken in a moment, and without even saying "good bye" to his thunderstruck auditors, he marched in double-quick time for the clearing, and never stopped until he reached a friendly shelter twenty miles distant. After this escapade he left that portion of the country, and joined a colony of Mormons *en route* for their Mecca at Salt Lake City. He became their leader ere he was two days in their midst; but after he had thoroughly won their confidence he stole two horses and a pair of mules, and decamped for new regions. He was next heard of as a practising lawyer, having gained admission to the courts by swearing that he had been admitted to the bar in one of the eastern cities; but his career in his new vocation was cut short by being detected in swearing to a false affidavit. This caused him to be tried for perjury, and he was found guilty; but good fortune again came to his aid, and he escaped conviction on the plea that he had a large family depending on him for bread.

His next appearance in public was as a lecturer on temperance, but being found drunk one day by some of his brethren he was dismissed from his office. He then turned to gambling for a livelihood, and managed to eke out an existence at that until he killed a man for 25 cents., when he fled the country, and was heard of no more for several years until he turned up as a candidate for political honours in a newly settled portion of the country, far away from the scenes of his former exploits. These he did not receive, however, when his career was made known; so, making the best of his discomfiture, he settled down into a hunter and stock-raiser, and was engaged in that business when I made his acquaintance. Those who knew him, however, surmised that he got his cattle as Rob Roy did, and that his hunting never extended to anything more fierce than a distant neighbour's sheep, cow, or horse. I was glad to have met with a character having so rich a history; yet I took care to avoid his company as much as possible.

The journey over the Umpqua region was made quite interesting by the number of picturesque vales that appeared suddenly amidst the hills, and the abundance of foliaceous trees. The towering pines were, however, the most attractive specimens of the botany of the country, as they loomed upward to a height of 300 or 400 feet. The grandest of these was the noble sugar pine, which grew to a height of 300 feet, and had a diameter ranging from 18 to 25 feet. It presented a graceful, symmetrical appearance that could scarcely be excelled, and its vigorous trunk contrasted strongly with its light branches. Its foliage did not seem so dense as that of the other pines, and its hue was a dark blue-green. This tree takes its name from the transparent resin which it exudes, and which, losing its terebinthine taste on exposure to the air, acquires a sweetness approaching that of manna, which it closely resembles in flavour. It is said to be used sometimes for sweetening food, although it has strong cathartic properties. The white, yellow, pitch, and nut pines were also quite common, and wherever the latter was met large numbers of nut-eating birds were seen, and not a few squirrels. This tree has not the heaviness of its congeners, having rather the port of an oak, and its foliage being a bluish-green gives it rather a peculiar aspect.

By midnight we reached a gloomy chasm called the Umpqua Canyon, which has a height of 800 feet, and up this almost perpendicular steep the six horses toiled and struggled for nearly an hour, although they had no heavier load than the mails and the driver and myself. When they halted for a rest, the flickering rays of the lamp revealed the plutonian abyss below in all its mysterious awe, and caused me to involuntarily recoil from its brink. The road was only wide enough to allow one carriage to pass comfortably at a time, and it was so full of curves as to seem a series of *culs-de-sac*; yet the stage-drivers dash down this declivity in the daytime with as much *nonchalance* as if they were driving in a park. By seven o'clock next morning we halted for breakfast at a stage station called Grave Creek, which was composed of only one farm-house. After a hearty repast on an Oregon breakfast of very fat ham and fried eggs, the journey was resumed, and in a few minutes we crossed the stream which gives the place its name.

This unimportant rivulet has a history that is both tragic and romantic. It received its appellation, according to some persons, from its being the scene of the murder of an emigrant family by Indians, two of whom were charming young ladies, during the war of 1855-6, and who were buried there by a party of soldiers. Others say that it derived its name from the fact that a mock funeral of an Indian chief was held there after the close of the above war. The story, as it goes by tradition, is, that the chieftain and his tribe had fought valorously against the whites, but being finally compelled to surrender, though not until they were nearly decimated, were placed on a reservation set apart for them and such of their race as had been captured. The chief grew morose over this enslavement, but knowing that it would be folly to take to the war-path again, he announced his intention to his people of relinquishing his chieftainship and burying it with all the pomp due to a warrior, that he might thenceforth be dead as a leader to his tribe, and forget the sorrows of the past. When the tribe heard it they went into mourning, and no persons stirred out of their tents for three days. On the night of the third day, every member of the encampment formed in procession in the woods and marched to Grave Creek, where a grave had been dug, and into this all the war paraphernalia of the chief were placed amid much barbaric ceremony. This done, the leader addressed his followers, saying that henceforth he was dead to them in name and position, but that he would ever do his utmost for their happiness. When this brief address was finished the grave was closed, and all returned home, chanting the death song of their tribe. The chief lived for several years after, but as Indians never mention the name of the dead, he took a new one, and placed himself on the same level as the others in all tribal matters.

Our road after leaving this creek lay over wooded hills and through nestling vales all day long, and as houses were far apart I had an opportunity of devoting all my attention to the scenes around me. They certainly were not very varied, yet the mind was kept engaged by the omnipresence of the animal creation, and the antics of the garrulous blue jays, and their cousins, the "whisky jacks," which darted about like meteors, scolded at everything, and indulged in gymnastic exercises on the hazel-bushes. Wood-hares seemed to be almost as numerous as fish in the sea, squirrels chattered in the woods, hawks soared gracefully high in the air, crows cawed in every meadow, song-sparrows piped their short lays amid the shrubbery, and even the deer, bear, and grey wolf crossed our paths, and gave us a look of inquiry, as if trying to decide to what order of animals we belonged, for they evidently knew little of man. We reached the Rogue River Valley early in the evening, and by nine o'clock were in Jacksonville, the largest and most important town in Southern Oregon. This place has a population of about 1,000, and being in the centre of a large mining and agricultural community, is enterprising and prosperous. It was the first place north of California in which gold was discovered, and this incident made it for a time the metropolis of the State; but since the decadence of the placer mines it has retired into a steady-going town which pays much attention to religion, education, politics, and quiet amusements. The region of which it is the capital has an area of 1,800 square miles, and is the equal in beauty, fertility of soil, and geniality of climate of any portion of North-western America. Its physical conformation is a rolling plain, interspersed with low, oak-covered hills, which make excellent pasturage or vineyards, as they have a gradual slope, a granitic soil, and are well drained. The experiments made with the grape have proved that it will thrive there as well as in California, and, having a large amount of saccharine matter, it makes good wine.

For fruit cultivation in general the region can scarcely be excelled, as it produces figs and peaches of fine flavour, and the cherry, plum, crab-apple, and all the smaller berries grow wild there. Its climate is much warmer than that of the more northerly sections, the average temperature in summer being 85°, and in winter 48°. A few days in July may reach 102° in the shade, and in January go down to 26°, but these are said to be exceptional cases. The summers are so long that two crops of figs are said to be gathered, and the winters so mild that they do not injure even the delicate magnolias. The winter may be said to be confined to December and January, when the nights are frosty, and a little snow falls at rare intervals, but it is never cold enough to cause any cessation of outdoor labour; and the hottest days are rarely oppressive, owing to the cold breezes which blow from the snowy crest of the Cascade Range, seventy miles distant.

There are more foliaceous trees in this valley than in any other portion of the State, owing to its southern latitude, and the abundance of the laurel, ceanothus, arbutus, chapparel, an manzanita give it a semi-tropical appearance. One of the hand somest trees in the State is the madrona *(Arbutus Menziesii)* which is a peculiarity of the flora of the Pacific. It attains a height of from 20 to 30 feet, and a diameter of 14 inches, and has an exfoliating bark, which is green in summer, but reddish in winter. The leaves being large, thick, and glistening, cause it to resemble the *Magnolia grandiflora* of the Southern States. The wood being hard and smooth, it could be used for the manufacture of domestic articles; but were it even useless for that purpose, it should form part of the arborescence of every well-kept garden, as it is both handsome and ornamental. The

California laurel is also a fine tree, and the equal of the noble laurel of Europe in beauty. It attains a height of 30 feet, a diameter of 7 inches, has a lustrous, evergreen foliage, numerous involucred flowers, and its leaves, when rubbed, emit an aromatic odour. The manzanita is much sought by the grizzly bear, its berries, the well-known *uva ursi*, being one of its favourite foods; hence, where it is plentiful, the monarch of the western wilds may be expected also.

The mineral wealth of this valley is deemed to be very great, as gold, lignite, quicksilver, magnetite, chromic iron, galena, graphite, gypsum, carbonate of lime, steatite, dolomite, and kindred minerals have been discovered in many localities. The placer gold mines, which cover an area of 100 square miles, have yielded 16,000,000 dollars since they were first worked in 1849; but they are now largely in the hands of the Chinese, who are content with from 2 to 5 dollars per day for their labour. Quartz ledges, which "prospect" well, have been found in several places, but the want of capital prevents the development of their treasure. The region is peculiarly rich in soda, salt, and sulphur springs, both cold and thermal, and others which yield boracite and magnesia. Their steam ascending into the air on a frosty morning throws a heavy vapour over the tract adjoining them, and gives it a rather misty aspect, while the odour they exhale has a most significant suggestion of subterranean abodes.

The great obstruction to the progress of this section is the want of means of communication with the outer world, they being at present confined to a steep mountain road leading to California, and another to the town of Roseburg, 100 miles to the north. On the completion of the Oregon and California Railroad, however, it will have ample facilities for the transportation of its products to a market, and one may then expect it to become all that its fertility of soil and geniality of climate could make it.

It should become a great resort for invalids, tourists, and the lovers of field sports, as it abounds with medicinal springs, boasts some of the strangest and grandest scenery on the continent, and its forests teem with deer, grouse, pigeons, and quail, and its streams and lakes with several species of the delicious mountain trout. The bear, panther, wolf, wild cat, and other animals which stand high in the estimation of the hunter, are found there as numerously as the people care for; and he who wishes to measure himself against them need not have far to go to fulfil his desires to the utmost. One pleasant fact about these woods and prairies is that there are few venomous reptiles in them, and the same may be said of the whole of Western Oregon; at least, I never heard of such a thing as a person being stung by a rattlesnake or any of its congeners. The only members of the *Ophidian* family that I saw there were the garter-snake, green-racer, and bull-snake, and they are perfectly harmless to human beings. Even flies—mosquitoes excepted—injurious to man or beast are, I believe, unknown, except in one section near the Lava Beds, where a horse-fly is so numerous and persistent in attack that it will seriously injure a horse left uncovered. The *Batrachians* even are few and of little importance, there being only three or four species of the *Anoura*, of which the most abundant is the Oregon wood-frog (*Hyla regilla*), found in the timbered regions. The *Uradela* has one representative in the warty salamander (*Taricha torosa*), a very slow and stupid creature. The *Saurian* family is also small, and confined to two species of the

Elegaria, a couple of fence lizards, and a horned toad (*Tapaya Douglasii*), found on the dry plains of Eastern Oregon. It would, therefore, seem as if some Indian Saint Patrick had banished the venomous reptiles from the country soon after it emerged from its icy coating. The cause of its immunity from these creatures is of course due to the humid climate; for it is a well-known fact that all snakes, except those attached to water, prefer a high, dry, sunny *habitat* to the rains and fogs of heavily wooded regions.

During my sojourn in Jacksonville a party of gentlemen planned an excursion to the Rogue River Falls and Crater Lake, two scenes well worthy of a visit from those who appreciate the beauties and wonders of nature, and at their invitation I accompanied them. Starting out early in the morning, we looked, as we emerged on the plains, like a body of guerillas going on a raid, as our raiment was composed of many textures and colours, and we were armed with rifles, shot-guns, revolvers, and bowie-knives, while our mustangs ranged in hues from black to piebald and white. Our motley appearance produced many witty comments from members of the cavalcade, but one was so carried away with its imposing mien that he compared it to the march of a body of knights going on a chivalric mission to break lances with their foes. A practical individual destroyed the effect of this noble simile, however, by suggesting that we looked more like horse thieves, or outcasts from civilization, who were rushing all over the country in search of something to steal, and he strongly intimated that our presence in any hamlet would cause the people to lock up their houses, or to turn out and fight us. With such good-natured *badinage* as this the morning passed rapidly away; but finding that we should not reach our destination as soon as desirable by keeping at the pace we were then going, the leader gave the driver of the waggon containing our tents and provisions instructions where to meet us, then slyly hinted that we ought to gallop away from the waggon as rapidly as possible if we would not be suspected of being out on a poultry-stealing expedition. The hint was laughingly taken, and putting spurs to our mustangs, we were soon dashing over the prairie at a break-neck pace, and in a comparatively short time reached our first halting-place, on the wooded banks of the Rogue River.

I noticed here, as I had in the open spaces, the unusual abundance of liliaceous plants, and the gaudy colours of nearly all the flowers. This gave the region a most brilliant appearance, for red, yellow, crimson, purple, straw, and light blue hues were the most prominent; modesty of floral attire was, in fact, conspicuous by its absence, and this I subsequently found to be the case throughout the whole of North-western America.

Our first movement, after tethering the horses and turning them out to graze in a pasture so rich that the grass reached above their knees, was to make a pilgrimage to the Rogue River Falls, and drink in their beauty for an hour. These falls are formed by the river not far from where it breaks through the Coast Range on its way to the sea. The stream being surrounded by magnificent firs, pines, cedars, and other trees throughout its entire course, it has the appearance, in perspective, of an undulating silvery thread stretched through an extensive field of foliage; and where it takes its abrupt leap the forest is so dense as to be almost impassable in summer, owing to the luxuriance of the shrubbery and undergrowth, and so dark and cool, even in the warmest weather, as to exhale a palpable humid coolness. Looking upward at the falls from their base, they are seen to emerge from a narrow opening between two huge masses of dark crags; but ere they reach the ground they seem divided into three sections of foamy spray, owing to the interruption of the line of sight by the dense and tangled foliage. Their actual height is estimated at 200 feet, and their width at 30; and their volume of water in early summer, during the spring freshets, at a depth of 8 feet. They are then in their finest condition, and the stream possesses such powerful velocity that it whirls large crags along its course as if they were pebbles. One of the most interesting features of the falls is the luxuriance of the mosses and lichens wherever the spray falls. Their base is surrounded by cedars, junipers, alders, and willows, which are covered with moss to such an extent that their trunks and branches are almost concealed. This, of course, prevents much leafage, so that they present the appearance of a forest of gigantic mosses. Desiring to avoid the spray, I tore away some of the mossy covering from a tree, and found between it and the trunk a chamber, large enough to hold ten persons, and thoroughly waterproof. In this snug retreat I had a fine opportunity of studying the delightful scene before me, which in picturesqueness excelled any of a similar character I had seen before. The water in its fall threw copious showers upon the evergreens, and produced a permanent rainbow in the forest which extended from the highest tree to the lowest shrub. This was the first effect of its kind I had ever noticed, and most pleasing it seemed, as the line of foliage through which it passed was brilliantly illuminated with all the prismatic hues.

Having feasted our eyes on this vista of wood and water, we returned to the upper world once more and made preparations for supper. As we had no fresh meat it was decided to kill some deer, while others went fishing; but who should hunt and who should fish was a difficult matter to decide, as all seemed to be aching to practise their rifles or shot-guns on something, if it were only a squirrel. The dilemma was solved, however, by drawing lots as to who should be compelled to try and drown a worm for an hour or two; and as I was one of these, I cut a twig for a rod, tied my line to it, and soon had my legs dangling over a bank, trying to drown a very small angle-worm. I was not long engaged in this arduous duty when my hook was seized with a vigour that seemed to bring my heart to my mouth; but I soon recovered myself, and fought as well as I could against a 6-lb. trout as to whether I should land him on the bank or he pull me into the water. Science triumphed and I was victor. The fish were so plentiful and voracious that it became a labour to haul them ashore; and thinking I had enough, after I caught two dozen splendid fellows, I returned to camp, and there found some of the expedition busily engaged in skinning two fine stags which they had slain within half an hour after starting on the hunt. The others were not so fortunate, but every one brought in something—a hare, a wood-duck, or a grouse; and one individual who could find nothing else, and was resolved not to return empty-handed, brought in a long-tailed wood-rat—the greatest thief on earth—which he found trying to steal an old boot-heel, hoary with age and hard work. When he threw his treasure on the ground, a cry was raised immediately to hang him as a "heathen Chinee" sailing under false colours; but the sentence, after much argument, was changed into making him bring all the water needed for supper, and this he promised to do. That *al fresco* meal was a joyous one, for wit and humorous story enlivened it. When it was finished, and pipes or cigars were lighted, the "yarners" commenced their work and kept it going until near midnight, when the laughter-satiated expedition retired to rest. We were astir early the next morning, and after breakfast moved for the Cascade Range, about eighty miles distant, to visit Crater Lake. Our route led over some of the finest views to be found on the continent, for on one side were the cumulus-covered snow peaks, and on the others, heavily timbered mountains 4,000 feet high, while between, like a sea of verdure, rolled the undulating valley. We camped out the first night without any other covering than our blankets, and by noon of the next day reached the object of our journey, high up amidst the forests of the Cascade Range.

I had heard much of this lake, and expected much, as a matter of course; but I must say that it went far beyond my most sanguine expectations. When we first reached its summit the mountain was covered with an almost impenetrable mist that concealed all objects; but that soon cleared away, and we had a fine opportunity of gazing down into the cavernous depths of the rock-bound tarn. From measurements made by a party of engineers, the lake was found to be the most deeply buried body of water of its size known, the altitude of its walls being placed at 2,500 feet, and its superficial area at thirty-six square miles. It is said that a ball fired from a rifle cannot be seen to strike the water, a statement very natural to believe, inasmuch as it is nearly half a mile from the top to the surface of the lake. Several of our party tried it, but in no instance could the bullet be seen to strike, nor did I expect it at that distance. We reached the water by following a steep trail formed by the large wild animals which frequent it to allay their thirst, and considered ourselves quite fortunate in doing so without suffering any greater injury than a few gashes from jagged stones. Once below, and we had a splendid view of the watery waste that stretched out before us like a lake of ink, and the towering walls that enveloped it in so close an embrace that no vestige of a shore-line was visible. The water had a dark-blue look, exactly like ink, and this blackish effect was increased by the sooty crags and the sombre conifers that grew on their summits. The picture it presented had no expression of brightness or gentleness in its composition; all was savage wildness, rude grandeur, and cold desolation; for look were one would and nothing greeted the vision but black waves, bare crags, and gloomy trees. The silence was so oppressive as to seem droning, and the absence of all life gave it an air of weird solitude that appeared unnatural. It is a perfect tarn of death, for not a fish lives in its inky waters, nor a fly in the air, and no song bird ever enlivens its brooding stillness with a merry warble. After gazing upon it for awhile it seems exceedingly unearthly, and arouses a feeling of strangeness akin to awe, which is difficult to shake off.

Our party went on a tour of exploration over it, having found an old skiff, which had been built by earlier visitors, near the shore. Our first halt was at a rocky islet which rises up in its centre to a height of 1,200 feet. This has a crater in the top which is 100 feet deep, and whose mouth is one mass of scoriaceous lava. A long line told us that the water at the base of the island was over 500 feet deep, so that the lake from the top of the walls to the bottom is over half a mile in depth. It is certainly a wonderful spot, and one well worth visiting, if only for its unique character.

CHAPTER VII.

EXCURSIONS IN A STRANGE LAND.

Lava-Beds—A region of extinguished fire—A vast zoological garden—A bird concert—A land of lakes and manna—A sage desert—Character of Middle and Eastern Oregon—Their soil, climate, and mineral and agricultural products—A splendid grazing country—Perennial grasses—The game animals—A strange quadruped—The future of the eastern division—Return to Portland.

HAVING made a thorough examination of the lake, and devoted a portion of a day to gathering interesting fossils found extensively on the mountains, we returned to the Rogue River Valley, and there I left the party with regret, as my route of travel led to the eastward. Having engaged an Indian guide and two mustangs, I resumed my rambles, and toward the evening of the second day found myself amidst the savage wildness of the Klamath Basin, a region so eruptive that it seemed as if the huge volcanic ledges which covered it had been ejected from the fiery furnace only a short time before. Instead of rolling prairies, bright with verdure and flowers, I saw only miles upon miles of sooty trap, whose forbidding aspect was but slightly relieved by the bluish-green hue of a wilderness of artemisia, and in place of luxuriant forests I beheld only a few coppices of yellow and scrub pines, and an occasional low-creeping juniper that looked as if it could scarcely obtain sustenance enough to live in the arid soil. The contrast between this and the sections I had visited was so great that it appeared to me as if I had been suddenly transferred to another planet. West of the mountains, the land seemed to be of lacustrine origin, and to have been formed by gradual upheaval; here, everything indicated the most violent igneous action, for vesicular trap composed the substratum of a large area, and formed deep, broad chasms, towering columns, extensive plateaus, and high hills, which stretched in a series of layers for miles.

Pumice, scoria, obsidian, and volcanic tufa were scattered about in the most wayward manner, but the former was the most abundant, and gave a large portion of the region a greyish appearance. Stratified sandstones, containing infusorial marls, were unusually profuse in some places—so profuse, in fact, that the marls produced an efflorescence that caused the ground to look as if it were covered with snow. It was in these Lava-Beds that the Modoc tribe of Indians made their famous stand against the army of the United States in 1873, and kept a force many times larger than their own at bay for several months. Any one who has seen the region, however, would not be surprised at the obstinacy of the defence, for if any place on earth is adapted to defensive warfare it is this, its entire area being one mass of crags and cavities, deep precipices and perpendicular walls. A large army could lie concealed amidst its caverns, and it would require a diligent search to find it, provided its members wished to keep secreted. Every crag can be utilized as a breastwork, and if driven from one, millions more behind it afford a shelter impenetrable alike to rifle-ball or cannon-shell. I visited some of the caves used by the red men, and found several of them large enough to contain forty persons, and so well covered that even a mortar-shell could not injure them.

One of the most interesting scenes in Oregon may be enjoyed in this land of recent fire, and he who has gazed upon it once will not be apt to ever forget it. The place is full of lakes, which vary from nine to fifty miles in length, and from four to seven in width, and during the spring and summer they are the resort of nearly every game animal, whether fur or feather, indigenous to North-western America from the 37th to the 59th parallel of latitude. The region is, in reality, one vast zoological garden, in which are congregated the denizens of the water, the forest, and the air, and in such numbers as to cause one to wonder how they can find food and shelter even in that large area.

The margins of the lakes, where the soil is somewhat soft, contain millions of footprints of birds and beasts, and if a person did not see the animals themselves he could tell from the pedal hieroglyphics which are the most numerous, and to what families they belong. He need not depend on them, however, for his knowledge, for after a tarry of a few days near the tarns he will have seen the greater portion of the creatures that haunt the country. At the head of the quadrupeds stands the grizzly bear, and he is followed by the black bear, the dusky and the grey wolf, the grey fox, wild cat, civet cat, fisher or black cat, beaver, otter, mink, sable, badger, polecat, weasel, wolverine, ground-squirrel, pouched rat, kangaroo-rat, red hare, jack rabbit, sage hare, mule-deer, antelope, and mountain sheep, besides others less common. These frequent the region owing to its abundance of grass, nuts, and water, the absence of human foes, and the shelter afforded by the caves or the coppices of pines and larches on the hills. It may, therefore, be safely said that it will compare with any portion of Central Africa in its profusion of animal life, and it certainly excels any part of the United States. Abundant as the quadrupeds are, they are but as a small river is to a sea compared with the feathered creation. The birds can be counted only by the million, and every species on the North Pacific coast that frequents water for a livelihood is represented there. At their head stands the bald-headed or fishing-eagle, which may be seen idly perched on a tree, or diving suddenly into a lake or a seething cascade after a bright-coloured trout. The osprey is also common, and, fortunately for itself, forced to fish only for itself, as food is so abundant that the eagle never pursues it after it has made a finny capture. The lanier falcon, the red-bellied hawk, and three species of owls find plenty of pabulum there in the hares and squirrels; and the raven, piebald crow, and nutcracker live at their ease during the summer, and only seek the valleys when the rude north wind indicates the approach of winter. The aquatic or semi-aquatic birds are the most abundant of all, their numbers being actually incalculable. Myriads would be the only word to give an idea of their profusion, for they are found in the vicinity of every stream or tarn extending over an area of 2,000 square miles, and that area may be literally termed a lake region, for it boasts at least 100 tarns of all grades, from the one of a few acres to one having a length of fifty miles. I made my first visit to the Klamath Marsh, a shallow lake covered with grass and tall bullrushes, which has a width of five and a length of twenty-five miles, and found, on exploring it, that it was one mass of eggs and young birds, scarcely a foot of it being unoccupied. On wading through it I disturbed some of the mothers sitting on their nest, and they raised a cry of alarm that caused every bird in the place to set up a wild scream of fear. The result was such an unmusical chorus as I had never heard before, and never care to again, for it was anything but pleasant to the feelings. As I moved onward the ducks flew as soon as they heard me approach, but the cranes waited until I was near them, and the gulls seemed ready to dispute my presence, and to consider me a most unwelcome intruder. Before I had been exploring the place twenty minutes I had a larger crowd of whirling, screaming feathers over my head than I ever expected to see at once, but as I did not seem inclined to do their nests any injury they darted down to them as soon as I passed on.

Having waded about until I became weary, I returned to my tent just in time to avoid a heavy shower and the possibility of being lost in the dense fog that followed it. While enjoying a quiet cigar in my little canvas house I heard a whirlwind of feathers approaching, and knew by the cries that the males were returning home from their foraging expedition. Each family or tribe announced its presence by the tribal cry, and this was responded to by the matrons and their broods in the marsh. First came the croaking cranes and herons, then the screaming gulls, and after them, in mixed order, trumpeting swans, wailing curlews, squawking ducks, and honking geese. A little later the weird moan of the bittern, the whistle of the snipe, plover, tattler, and sanderling, and the cries of godwits, avosets, phalaropes, and other birds were heard, until, at length, all was still, and nothing could be heard but the affectionate crooning of the mates in the marsh.

Retiring to my humble bed on the ground at an early hour, I slept soundly until a tremendous uproar awoke me at daylight the next morning. On going outside the tent I found that the sky was black with birds, and that all were screaming in the most emphatic manner, as if they had just received the use of their tongues, and were practising them to learn if they were in good condition. After whirling about for ten or fifteen minutes, the families formed by themselves and winged their flight to the feeding-grounds near the sea-coast, or to other lakes and streams. The first to move off were the Grallatores, led by the cranes, the rear being occupied by the herons, and they kept their well-known columnar advance with the utmost precision. They were followed by the geese arranged in V shape, the swans in skirmishing order, the curlews in bunches, the ducks in dense masses, the gulls in irregular clusters, and the snipe tribe in heavy columns. It took at least three hours for this cloud of feathers to pass beyond sight, and tedious as it became to stare at it, yet I was sorry to see it disappear, as it was probably one of the grandest ornithological scenes to be found on earth.

After breakfast I crossed to the opposite side of the marsh, and there found a small party of Indians gathering the yellow pond-lily (*Nuphura advena*), in the sacks of civilization, and placing them in their wigwams when filled. This plant, which they call *wocus*, covers one-half the marsh, and when in bloom gives it a very pleasant aspect. The red men collect immense quantities of it, and after they have extracted the pods a general feast is given, in which camass-roots, crushed sunflower-seeds and *wocus* form the principal dishes, they being supported by venison or bear steak, and plenty of fish from the streams. After the feast is over a grand dance is held in honour of the arrival at maturity of their favourite plant, and this is kept up until tired nature woos them to balmy sleep. The *wocus* is said to be palatable and wholesome, to taste much like parched maize when cooked, and to be highly nutritious, owing to the quantity of oil it contains. After a friendly conversation with the tribe I moved towards Big Klamath Lake, a few miles distant, and there halted. This splendid tarn has a length of twenty and a width of six miles, and is navigable for schooners its entire length. Several vessels ply on its often stormy waters, and keep communication open between the settlements environing it.

They have one most decided advantage in sailing above all other crafts, and that is, that they can have the wind in their favour within the space of a few hours, for the breeze blowing in one direction in the morning blows in the opposite in the evening. The margins of this lake are covered with luxuriant grass and some tall tules, and in these myriads of waterfowl rear their young, while the quadrupeds are as numerous as one could wish them to be. The most striking features of the latter are the large herds of antelopes frequently seen during the day, and the long-drawn, weird howling of packs of prairie wolves, which disturbs the traveller's rest at night, and causes him to execrate the choristers with a vigour most derogatory to his peace of mind. Little Klamath Lake, which is nine by six miles, is connected with the former by a rapid stream called Link River, and both find an outlet in Klamath River, which flows through Oregon for forty miles, and empties into the ocean in California. This region may be called a watershed, as it teems with streams and tarns which are, in the majority of cases, stocked with several species of edible fish. The brook-trout, a handsome, plucky creature, weighing from 4 ozs. to 2 lbs., is found in every rivulet, its best congeners being a whiting (*homalopomus*) and a *coregonus* or white fish. The *Cyprinoid* family is well represented in the lakes, but the most common is a sucker (*Algansea bicolor*), whose back and sides are a metallic blue intermingled with a golden yellow; inferior region a whitish yellow. The first species bites at a hook readily, but the latter is generally snared. The streams having a connection with the ocean are crowded with several varieties of salmon from April to December; but they do not take a fly late in the season, and their favourite bait, salmon-roe, is difficult to keep on the hook in rapid currents. The Indians fish with buckets or baskets in this region, for so plentiful are white fish and suckers in some of the streams and lakes that they can be baled out like water. North-east of the Klamath Basin are several large lakes varying from eight to fifty miles in length, and from three to seven in width, which are frequented by millions of birds and a large number of quadrupeds, and every stream connected with them is thronged with trout. The most important are Goose Lake, thirty miles long; Lake Abert, fifteen; Summer Lake, eighteen; Silver Lake, eight; Christmas Lakes, fifty; Warner Lake, thirty-five; and Harney Lake, which has an area of 300 square miles, and is connected with some others of less importance by a narrow stream.

Adjoining these tarns are several fine valleys which are fit for either grazing or agriculture; but as the region has an average altitude of over 4,000 feet above the level of the sea, frost is produced nearly every night throughout the year in some parts, and this of course is injurious to the full development of cereals and fruits. The winters are also quite long, snow remaining on the ground from four to five months. The people residing there are principally engaged in stock-raising, as they have immense areas of land, for which they pay nothing, on which to graze their cattle, and the bunch-grass is so abundant that they are never compelled to seek new pasturage for them. The Chewacan Valley, which extends from Goose to Abert Lake on the west and a sage desert on the north, is well wooded and watered, and possesses a deep, rich soil, fit for agricultural purposes. Wild flax of excellent quality grows profusely there, and scattered over its surface are extensive orchards of wild plums and cherries. A peculiarity of this valley is the honeydew, which the settlers call manna, which falls, apparently in showers, during the night, as it is gathered on the bushes in the morning in crystals ranging from one-tenth to one-fourth of an inch in thickness. The Indians gather it in large quantities, and eat it with a relish which can be excelled only by the bear.

Leaving this region for Middle Oregon, I found the whole of the country lying between Klamath Marsh and the Des Chutes River covered with pulverized pumice, which supported a few meagre pines and a profusion of useless wild sage; but the Des Chutes Basin itself, which is a series of rolling tablelands varying from 2,000 to 3,000 feet in altitude, was composed of volcanic tufa, conglomerates, and marls. Cones of trap rose abruptly from the plains to a height of 300 feet in some places, and in others the basalt formed a series of cavities, or deep precipices, through which rivers brawled. This section was wild and inhospitable in the extreme; but on approaching the Warm Springs region the land became more fertile, especially along the course of streams. Siliceous springs, which were quite hot, were scattered over the country, and near them I found large quantities of silicified wood which was almost as white as snow. Approaching the Dalles, I met with large numbers of mounds, which averaged from 3 to 8 feet in height, and from 60 to 200 feet in circumference. These resembled huge earth blisters, and looked as if they were caused by molten lava falling on marshy or water-covered ground, then elevated by the gas created by the contact, and retained in position until they cooled and solidified. From this point until the farthest eastern limit of the State is reached trap and some metamorphic rocks form the mountains, and, when pulverized, the soil of the valleys, and the result is that the landscape visible in every direction is confined to extensive plateaus, which extend in roll after roll to the horizon. The only woods to be seen, except those on the hills, are small coppices of poplars, willows, and alders, which follow the windings of streams, and this paucity of arborescence gives the country a somewhat barren aspect. The land adapted to agricultural purposes is also confined to the course of rivers, except in special instances; but where irrigation has been introduced the soil has yielded splendid crops of fruits, esculents, and cereals. The summers being long and dry, fruits attain unusual size and flavour, especially the peach, grape, apple, and pear, and maize, melons, sweet potatoes, and sorghum grow much better than in the western division. From the midland to the eastern portion of the State the treeless tablelands, which average about 1,300 feet above the level of the sea, are covered in some parts with deserts of artemisia, but the larger portion is densely clad with several varieties of the most nutritious grasses.

The Blue Mountains, which run through the whole of Eastern Oregon, have an average height of 5,000 feet, and are heavily timbered with firs, pines, larches, and kindred trees, and are the homes of large herds of the mule-deer, packs of wolves, numerous foxes, and immense numbers of grouse. On their eastern border a splendid valley, round as a basin, and deemed to be as fertile as any portion of the continent, appears, and extends eastward for a distance of forty miles. This is called the Grande Ronde Valley, and most appropriately, as it is surrounded on all sides by gently sloping wooded hills. It is exceedingly rich in minerals, gold, silver, iron, copper, and lignite having been found there in large quantities. The gold-mines, which are principally placer, are very rich, and give employment to a large number of men, but half the wealth of the section is still unknown, as portions of it have never been explored. These mines are supplied from the towns in the valley with all their machinery, while the farmers furnish them with flour direct from the mills. This region is fit for either agriculture or stock-raising, and both are now attracting a large share of attention. The Wallowa Valley, adjoining this, is a beautiful mountain vale which teems with game and fish, and is dotted with fine open parks, lakes, and coppices, and watered by several streams. No white men have settled in it yet, but as population increases they will, undoubtedly, push in there.

East of this come more round, lake-like valleys, the most important being Burnt River Valley, which is noted for its mineral wealth, the fertility of its soil along the course of streams and lakes, and its large area of grazing lands. The mines there are both placer and quartz, and yield about 2,000,000 dollars per annum, yet this is only a part of what they would produce were water more abundant. There are some fifty or more mining camps now in the county, and the number is steadily increasing as the region is becoming better known. This section, which is called Baker County, is said to produce from 30 to 80 bushels of wheat to the acre, and to average 45 at the lowest, year after year. The cause for this high rate of production farmers attribute to the deep, rich soil, which contains the quantity of alkaline matter needed by cereals; the long dry summers, which ripen them thoroughly; and, finally, the absence of insects and any disease injurious to them.

While many portions of Eastern Oregon produce abundant crops, yet its great features are its extensive beds of minerals, both precious and useful, and its immense area of grazing land, which can support millions of animals summer and winter without any greater provision being made for them than to give them a little food and shelter during an unusually severe winter. It is covered with several species of excellent *graminæ*, the most important being the bunch-grass (*Festucca scabrella*), which grows in clumps to a height of 12 or 14 inches, and, owing to the dryness of the climate, cures on the stalk, so retains its nutritive qualities all the year round. This grass grows profusely in North-western America over an area of 300,000 square miles, and furnishes a pasturage unsurpassed by any portion of the world; but in no place is it more abundant than in Eastern Oregon. Its merits are now becoming known, and we find, as a result, breeders of blooded horses and fleece-bearing goats, stock-raisers, and sheep farmers crowding into this section from many parts of the world. Australia, England, Scotland, Ireland, the Atlantic States, and even South America, are represented there by larger numbers of graziers than one would possibly imagine, and they belong to all social grades, from the sons of peers, ex-officers of the army and navy, and the cadets of country gentlemen, to the once small farmer and the professional shepherd who has started in business for himself. All with whom I talked were well pleased with their position, and from them I learned some facts of the advantages which the country afforded them over all others with which they were acquainted. In the first place, cattle were neither fed nor sheltered throughout the year, except in extraordinarily tempestuous winters, when frozen snow covered up the grass to such an extent that the animals, especially sheep, could not scrape it away; and secondly, cattle were more prolific than they were in other countries, and the fleece of the sheep was vastly improved in length and fineness, owing to its freedom from burrs and dust, and the equability of the climate. Oregon wool brings the highest price in the market, and blankets, stockings, and cloths made from it cannot be manufactured rapidly enough to supply the demand. An intelligent Australian sheep-raiser who had settled there, told me that one peculiarity of the wool was its spiral form, which enables it to be made into the closest thread, as the fibres encircle each other, and acquire a density and strength unsurpassed by the product of any nation. It is also fine, soft, and flexible, and being of uniform length, easily separated, and possessing strength and tenacity, it is more easily worked than even the best products of Spain. Every pound raised can be sold readily and at a good price; hence he considered himself peculiarly fortunate in having established himself there. I learned from another intelligent English gentleman, who had served several years in the navy, that his herds and flocks were never troubled with disease, and that he had not fed them during the winter while he had been settled there (about four years), and that he employed only two Scotch herders and four dogs to attend to over 5,000 sheep and 2,000 horned cattle and horses. He had no complaints to make of wild animals, the only dangerous quadruped being a prairie wolf, and that was easily kept away by even a cur dog.

From what I saw of the country I should say that a great part of the future emigration into the State must flow into Eastern Oregon, as the larger portion of it is still unoccupied, and good farms may be found along rivers, rivulets, and lakes; and miles of grazing ranges can be obtained for nothing, at least for the present, as the land belongs to the Federal Government. The climate of the eastern division differs radically from that of the western, it being drier, warmer in summer, and colder in winter. The winter is confined to three months, in which snow falls to a depth of from 3 to 12 inches, and the thermometer sometimes goes to 14° below zero; yet its average may be placed at 34°, except in the subalpine regions, where it is probably 29°. The days are generally fine and sunny, and the air is clear and bracing. The summer temperature averages 75°, but it sometimes goes as high as 100°, though rarely; and even then it is not oppressively warm, owing to the cool breezes which blow from the snowy Cascade Range. Little rain falls, the annual quantity being from 16 to 20 inches,—not enough to furnish water to fully work the placer mines, or even to supply crops all the moisture they need. The dew is also very light, and this causes shrubbery to be rather scarce; yet flowers grow profusely, but they are the varieties that do not require much of the hyaline fluid to thrive. They are different to those west of the Cascades; indeed, the flora of the two sections are almost as distinct as if they belonged to the opposite ends of the globe. The same may be said of the animals, for the species found on one side of the mountains are seldom, if ever, found on the other, so that the Cascade Range might dispute with the Himalayas the honour of being the most arbitrary chain in the world in the distribution of animal life. We find all birds and beasts fond of woodlands on the western side, and on the eastern those that love open plains, and prefer a hole in the ground to the shelter of a friendly tree. Thus we find badgers, prairie wolves, ground squirrels, foxes, sage hares, antelopes, mule-deer, and mountain sheep on the eastern side; but they never cross to the west. The only quadruped that I saw on both sides was a curious little creature called a *showtl* by the Indians, and known in the scientific world as *Aplodontia leporina,* owing to its molar teeth being rootless. It has been proved to be a new genus of the subfamily *Castorinæ,* and to be the connecting-link between the *Spermophiles,* or ground squirrels, and the beavers. It possesses a keen interest for naturalists by its being the only species of its genus thus far discovered, and being exceedingly limited in its *habitat.* It lives in burrows, and feeds on young shrubs and the leaves of trees. Wherever it is established nothing green can be seen for quite a distance, for, being an inveterate miner, it destroys the roots of plants even when it does not touch the foliage. This insignificant animal, when full grown, averages 14 inches in length and 6 in height; has scarcely any tail, the cauda being less than an inch in length; and its fur, which is thick and tolerably fine, is of a reddish-brown hue outside, and a bluish-grey inside. The flesh is quite savoury, and is highly prized by Indians, prairie wolves, and badgers. The latter are its most inveterate foes, and they destroy a colony as quickly as a terrier would a nest of rats. Having no means of defence, except by fleeing to its burrow, and being exceedingly slow in movement, it is readily captured by more fleet-footed creatures and easily destroyed, as it displays no combativeness. What use it is in the economy of nature, except to sustain complete the link of creation, is a matter of conjecture, as it is too scarce to be of any use to man, and too defenceless to maintain itself against its numerous foes. The Indians have a tradition that it was the first animal endowed with life, and the source from which their race sprung, and on this account they pretend to entertain a reverence for it; but it is probably needless to state that this feeling never goes further than expediency with them, and that they slay it whenever they get the opportunity. It is found on the gravelly plains west of the Cascade Range, and in a few spots on the eastern side, so that it has the distinguished honour of being the only quadruped in the country whose *habitat* cannot be affected by that towering chain.

Having travelled all over Eastern Oregon, I would say that it is one of the best grazing regions on the American continent; and if stock-raisers could only secure a small farm convenient to wood and water, they would go far afield ere they could find a better country for the prosecution of their business. Of the healthfulness of this division little need be said, except to state that in the reports of the Surgeon-General of the United States Army he rates Oregon, Washington Territory, and Idaho as the most healthful parts of the Union. He places the mortality in Arkansas at one in 48; in Massachusetts and Louisiana at one in 57; in Kansas at one in 68; and in Oregon at one in 172. The deaths from fever at military posts throughout the continent were:—New York Harbour, one in 66; southern frontier of Texas, one in 67; St. Louis, Missouri, one in 113; New England, one in 283; and Oregon, one in 529. The State is therefore the healthiest in the Union; yet it has its diseases, like every other portion of the world. Rheumatism is not unknown; a species of remittent fever appears occasionally; but the only disease that might be called indigenous is an intermittent fever which attacks those who dwell along the low bottom lands adjoining the rivers in the western division. The climate is said to be favourable to consumptives, owing to its equability; and that of the eastern division is recommended to those with whom the disease has not become chronic. The highest death-rate quoted in the Government census of 1870 was,—Oregon 0·69 per cent., and for the entire United States, 1·28.

Having extracted all the pleasure I could from Eastern Oregon, I re-crossed the Cascade Range, and reached Portland once more, to renew my travels in new lands.

CHAPTER VIII.

WANDERINGS IN WASHINGTON TERRITORY.

Physical characteristics of the country—The Columbia Basin—Vancouver and Kalama—A trip on the Cowlitz River—An Arcadian settlement—The Garden of the Territory—Products of Western Washington—A canoe voyage on the Chehalis River—Incidents *en route*—New settlers—How to choose good farming land—Gray's Harbour and Shoalwater Bay—Myriads of fishes and innumerable sea-birds—An unexplored country—Through the forest—Curious mounds—Tumwater Falls—The city of Olympia.

WASHINGTON Territory, which is the most north-westerly portion of the United States, lies directly north of Oregon, being separated from it by the Columbia River. It extends from the 46th to the 49th parallel of latitude, and through eight degrees of longitude; stretches along the frontier of British Columbia for a distance of 360 miles; and has a length of 400 miles. It has a total area of 69,994 square miles, or 44,796,160 acres, of which less than one-fourth is surveyed. It has a population of about 40,000, five-eighths of whom are settled in Western Washington.

Like Oregon, the country is divided into two grand divisions by the Cascade Range, and these are called respectively Eastern and Western Washington. The latter is again subdivided by the Coast Range into three sections, known as the Columbia, Chehalis, and Puget Sound Basins. This division has an area of 30,000 square miles, more than one-half of which is covered with dense forests of the gigantic *coniferæ* peculiar to North-western America, and some deciduous trees. It has a great maritime artery in Puget Sound, a magnificent inland sea that covers an area of 2,000 square miles, and every rod of which is navigable for ships of the largest model, there being neither rock nor shoal from one end to the other; and as it is never ruffled by storms, a canoe can traverse it with almost as much safety as the largest sea-going vessel.

The Columbia Basin is that portion which adjoins the river whose name it bears, and extends from the ocean to a distance of over 100 miles inland. Its soil is a mixture of clay and loam, which produces excellent grasses; but along the course of streams it is an alluvial deposit, which is capable of producing cereals, tuberous roots and fruits. One serious disadvantage of the region is its liability to be overflowed by the Columbia during the freshets in June, when immense quantities of melted snow pour down from the mountains in torrents, and raise the river from 10 to 20 feet in a week. This causes settlements to be scarce there, so the few occupying it devote a large share of their energies to dairy farming, hunting, and salmon-fishing. There being no towns along that side of the river for over a distance of 100 miles, I paid my first visit to Vancouver, a quiet hamlet of perhaps 500 inhabitants, distant from Portland about eighteen miles by water, and six by land. This place has scarcely any importance, owing to the paucity of an agricultural population in the surrounding country, and the absence of any special enterprises, and what little it does possess is due to the fact that it is a military post of the army, the residence of the Roman Catholic bishop of the Territory, and is called after Captain George Vancouver, the celebrated English navigator, who was the first to survey the Columbia River as far as this point in 1796.

It is surrounded by some charming scenery however, and commands a splendid view of the river, the forests, and the snowy peaks in the distance. It is quite an excursion resort for parties from Portland, as it has several charming natural parks adjacent. Leaving here, I moved down the Columbia, and halted at Kalama, a hamlet whose fame once echoed throughout the land as the future rival of San Francisco; but since the removal of the headquarters of the Northern Pacific Railway Company to Puget Sound it has fallen into a decay from which it is not probable that it will ever recover. It is now a mere waiting-station for passengers, and, though built several years, is still as rude and primitive in appearance as when it first sprung prematurely into existence. Trains run from this point to Puget Sound twice a day; but when I first wended my weary way in that direction I was forced to travel by canoe up rapid rivers, and by stage over heart-breaking corduroy roads, through mud several feet deep, and through trackless forests whose gloomy hue subdued all buoyant feelings, and whose heavy shrubbery lashed the face with incisive vigour. It is certainly far more comfortable to traverse the country in a well-equipped train than in any other conveyance, but it is much more romantic and exciting to traverse it in the light canoe of the red man, or the jolting diligence of the paleface, whose every shake causes the spinal column to creak, or the diaphragm to discharge a most unmusical and disagreeable grunt every few minutes. I left Kalama in an atom of a stern-wheel steamer that plied on the Cowlitz River, and was soon moving up that shallow stream at the rate of two or three knots an hour, for the current was so strong that the little boat had to make every possible exertion to beat against it in some places.

The few passengers aboard did not care how slowly she moved however, as they were enjoying themselves too well in shooting with revolvers at myriads of ducks in the water, or at the colonies of minks that scurried along the shore, to pay much heed to time. The stream was so narrow in some parts that one could have stepped ashore from the boat, and so shallow that it could be waded by ordinary-sized persons, except in occasional holes. We passed several Indian villages, which were deeply buried in the shrubbery, on the way up, and met several dusky Masaniellos engaged in salmon-fishing, or in trying to force their canoes over the rapids. As we flitted by them they seemed to look regretfully at our craft, and to wish they also had the power to advance despite winds and currents, and this caused us to feel pleased at being a fraction of that civilization which controlled the land and sea. After a run of several miles we reached a point on the river called Pumphrey's, and this being the head of steam navigation, we disembarked, and those who were going overland by stage remained there that night; but as I wished to see the wilds of the country, I engaged an Indian and a canoe, and was in less than half an hour once more afloat on the rapid river.

Making a pillow of my travelling-bag, I extended myself on some straw in the bottom of the canoe, and was preparing for a quiet series of meditations on rural beauties, when the craft gave a lurch, and was nearly upset by being caught in a cross current. This forced me to relinquish contemplation for hard work, for if I had not, it is doubtful if we could have passed over the numerous brawling cascades with which the stream was patched. By dint of poling, paddling, and the pushing and wading of the guide, we finally succeeded, after eight hours' work, in reaching a small hamlet, composed of two shops and a hotel, called Cowlitz. These were kept by three Canadian Frenchmen, polite, genial fellows, who did everything possible to make the wayfarer feel at home. Dismissing the guide, I hired a mustang, and early the next morning rode out over one of the most picturesque and fertile prairies to be found in the Territory. Heavy forests surrounded it on all sides, and, apparently within rifle-shot in the east, rose the snowy pinnacle of Mount St. Helen's and several lesser peaks. This arcadian locality is occupied entirely by Canadian *voyageurs* who were formerly employed by the Hudson Bay Company; but when that powerful organization retired from the country it gave its faithful servants this tract of land, and they settled upon it as American citizens in 1845. Several of them are married to Indian women or to half-breeds, yet they seem devotedly attached to their children, and spare no pains or expense to give them a good education. This is easily done, as the Sisters of Mercy have an establishment there, and the Territory supports a public school. The church in which the entire community attends divine worship is a conspicuous object on the prairie, being perched on the summit of a hillock that overlooks the settlement, as if it would exercise a moral supervision over the denizens of the scattered cottages. I noticed here in a small, but in other sections in a large degree, that half-breeds were much inclined to scrofulous complaints and consumption, and that they had a dull, deathly pallor if they took more after the father than the mother. They are also said to be largely imbued with the vices of both races unless their education in youth has been largely religious in character. Many of the women marry white men, but the males, as a rule, marry half-breeds or pure-blooded girls who have received an education in the Catholic schools. I never knew of a case in which a white woman married a half-breed, although many white men, especially those engaged in farming, are glad to get a half-breed woman for a wife, as she is useful either in the house or the hunting-field, and generally a conscientious mother. Whatever faults she may possess, the worst is, perhaps, an attachment to fire-water, but as she has few opportunities for obtaining it she cannot sin much in that direction.

Having spent two days in this pleasant vale, I secured a waggon which conveyed me to Claquato, a small village of a dozen houses, situated on the Chehalis River, and the largest and most important trading post in the Chehalis Basin. This fine basin or valley, which has an area of 2,000 square miles, is called the garden spot of Western Washington, as it is deemed to be the best agricultural land in the Territory. It extends from the Pacific Ocean to the Cascade Mountains, its greatest width being fifty, and its smallest fifteen miles. It is composed principally of rich bottom land, which produces all the leading grains, esculents, and fruits in the most generous manner, and hills and tablelands, useful either for grazing or cultivation. The chief products of the region and their average yield per acre, are:—wheat, 30 bushels; oats, 40; barley, 45, rising to a maximum of 90; potatoes, 250, maximum 800; onions, 200, maximum 900; turnips, 300; parsnips and carrots, from 500 to 1,000; and cabbage from 10,000 to 20,000 lbs. Cabbage-stalks left standing on the ground often produce from three to ten heads after the decapitation of the first, and the second growth is hard, sound, and of excellent quality. Apples, pears, cherries, plums, and berries grow luxuriantly, and are unusually large and well-flavoured. The apple-tree, owing to the early age at which it bears and the largeness of its crops, suffers frequently from decay; but the other fruit-trees live to a healthy old age. The *Grossulacæ* grow profusely in the woods, and form the greater portion of the ground shrubbery. Of these the most prolific is the red currant, which grows in every nook in which it can raise its head.

All the berries peculiar to Oregon, such as salmon-berries, whortleberries, raspberries, gooseberries, blackberries, yewberries, and many others, grow from the snow-line of the mountains to the sea-coast in the most wayward luxuriance, but they are not utilized. Other miscellaneous products of the valley are buckwheat, peas and beans, and hops, which are said to be unexcelled by the best English varieties, and to be even incomparable in the yield per acre. The farmers of this region are largely engaged in dairy farming and bee-keeping, as grass grows throughout the year, and offers excellent pasturage for cattle; and flowers noted for their saccharine character bloom from February to December, so that bees have a large commissariat from which to draw their stores. The products of this valley represent all those grown throughout the whole of Western Washington, but it is not every section whose yield per acre is so large. The great economic feature of the locality is the Chehalis River, which rises in the Cascade Range, and following a tortuous course empties into Gray's Harbour, eighty miles from its source. Though quite narrow, it is deep and placid, and is navigable for light-draught steamboats sixty miles from its mouth. This is a great blessing to the farmers, as the absence of roads, and the wooded character of the country, would render it exceedingly difficult to transport products to market, especially in winter, when the rains make the rich soil one mass of gluey mud. I went down this romantic stream in a canoe, and thoroughly enjoyed the wild scenery surrounding it, the luxuriance of the towering forests, and the profusion of animal life.

During the first day's run we were almost constantly routing flocks of wild ducks, or sending coveys of grouse whirring from the river-side into the sombre woods. We gave chase to a bear once, and I had the satisfaction of getting a shot at it, but not the pleasure of capturing it, as it was only hit in the flank. An hour after this incident I saw a panther crossing the stream, and fired at it as it bounded into the shrubbery, and on landing to see if I had not killed it, I found nothing to indicate the accuracy of my aim except a few drops of blood and many torn leaves, which proved that the animal had been wreaking its vengeance on the harmless foliage in its blind fury. This is the only species of the cat family that takes to water voluntarily, so far as my knowledge extends, yet that does not seem very partial to it, and enters it only when engaged on migratory tours. While scanning the banks of the stream for "signs," we found the hillock-like nests of the pouched rat, and, according to my dusky *cicerone,* these denoted a good soil and the close proximity of a fertile prairie. We also captured one specimen of the wood or hairy-tailed rat, the greatest thief on earth, for if ever there was a creature troubled with an incurable kleptomania it is this, as it will steal anything it can lay hold of, from an old sardine-box to a bit of iron; yet it is so poor in concealing its spoils that it uses the first receptacle it meets with as a safe or depository. Its nest is usually stored with all sorts of useless rubbish, varying from a feather to a pebble or a piece of cloth. The Indians call it the *meskadah* or thief, and kill it whenever they have the opportunity, and farmers wage war upon it with strychnine wherever it is common. I heard of one man who imported a couple of brown or Norway rats and turned them loose in his house, where the wood-rat was more abundant than was at all agreeable, and the result was the expulsion of the "thief" after a few battles. These creatures, though the equal in size and strength of the house-rat, yield it undisputed sway wherever it appears. It has not found its way to the interior of Washington Territory yet, and the result is that the white-footed or bushy-tailed individual is able to indulge unmolested in its peculiar propensity.

Having noted the peculiar characteristics of this animal, I took my seat in the canoe once more, and resumed my journey. The route carried us sometimes amid rapids that bowled us along at the rate of five miles an hour without even touching a paddle, but we frequently entered "back-water" produced by other streams flowing into the Chehalis, and this caused us to ply pole and paddle, and to use the pendent branches of the trees to make headway. Farm-houses were exceedingly scarce along the banks of the river, but we could occasionally tell where people resided by a ford, or the lowing of cattle in the woods. We passed two places in which Indians were making canoes, but they took no notice of us nor we of them.

By 8 p.m. we had made about forty-six miles, and thinking that a good day's work, we went ashore, prepared supper, and after eating it with the appetite of travellers, my blankets were spread under a gigantic fir, whose dense foliage formed a wide-spreading canopy, and I extended myself upon them in luxurious repose. The guide built a rousing fire to keep away obtrusive mosquitoes and wood-flies, and having placed rifles and revolvers in a convenient position to be found in case they were needed, he retired into the shade, and throwing himself on an old blanket was soon fast asleep. I also fell into a fitful slumber, but I had not been long in it ere something startled me into an attitude of the utmost wakefulness. Looking around for the cause of my alarm, I could see nothing at first, but when my eyes became used to the glare of the fire I could detect some greyish objects a short distance beyond a few scattered embers, gazing at them in the most inquisitive manner, and then at us. I guessed immediately what they were, and taking deliberate aim at two which stood close together I fired, and ere the report died away I could hear the painful howls of two wolves in mortal agony, and the alarmed yell of the suddenly aroused guide, who was startled out of his wits by the unexpected signal of danger. As soon as he learned its purport, however, he became cool at once, and sallied out in quest of the wolves. He found one dead in the tracks in which it stood, and knew by the quantity of blood on the ground that the other was so dangerously wounded that it could not travel far, and that we should be able to secure it in the morning. That matter settled, we retired to rest once more, and slept undisturbed until daylight. The first gleam of the sun's rays had hardly entered our forest home ere we went in quest of the lost wolf, and were fortunate in finding it within less than half a mile of camp. Having been hit in the fore shoulder, it was only wounded, yet so seriously that it could hardly move, so we had little trouble in finishing it with our revolvers. In returning to camp we noted that there must have been a dozen or more animals in the pack, judging by the number of tracks and the manner in which the leaves were scattered; but as this species seldom, if ever, attacks man, we felt no sense of a danger escaped. While eating breakfast we were visited by a band of Indians, who gazed wistfully at our bread and coffee; but as we did not seem disposed to be either social or generous, they went their way, but not until they were carefully scanned to see that they stole nothing, for they are excelled only by the native rat in kleptomaniac qualities. Hearing the sound of a hunting-horn a short distance inland, I moved towards it, thinking I should meet persons who would give me some information about my route, and the distance to Gray's Harbour. I had not proceeded far ere I encountered half a dozen light-bearded men who were out on a deer hunt; and from them I learned that they were Danes who had been settled in the country some time, and that a large number of Scandinavians had taken up land along the courses of the streams flowing into the ocean, and were doing remarkably well. In answer to a query, they replied that some splendid farms could be found on the banks of the Copalis, Typso, Chinois, and Humtolups Rivers, but that the absence of means of communication (except by canoe) with shipping ports kept people from occupying them. They, however, expected to see a large Scandinavian colony in the country in a few years, and predicted for it an undoubted success, owing to the natural thrift and industry of all Northmen. I also gleaned from them that settlers could live in the country without much trouble, owing to the abundance of game and fish, wild fruits, and such edible roots as the camass, and the wapato or prairie potato, while the forests furnished them with ample materials with which to build houses.

The great *desideratum* in choosing a farm site, according to their statements, is to obtain land having a deep, dark soil, and covered with deciduous trees, as the latter are easily cleared, and are, besides, a most positive indication that the locality is fertile, while the presence of the crab-apple-tree is a proof of an unusually good and lasting soil. Where it forms orchards by itself, several persons graft cuttings of the cultivated apple upon it, and by this means secure cooking apples or materials for preserves in a very short time. At the invitation of one of the party I accompanied him to his house. This was a log cabin, primitive as it could be, for it contained only one room, which was used both as a bed-chamber and kitchen. The interior was covered with sheets of German illustrated papers, and the exterior was ornamented with the antlers of the elk and deer, and with the well-preserved heads of bears and panthers. A neat vegetable garden surrounded it, and at a little distance in the rear patches of wheat, oats, barley, and rye could be seen. This man had two children, the eldest being a boy of twelve, yet young as he was, his father told me that he had often killed a deer, and had no fear of such wild animals as frequented the vicinity of the house. The every-day life of such children dispels feelings of fear, and the result is that they are models of daring and self-reliance. After I had been introduced to the wife, who only spoke a few words of English, and tasted my host's home-made wines, I bade him farewell, and, returning to the canoe, was again speeding on towards the ocean at a velocity of six miles an hour.

I reached my destination, Gray's Harbour, early in the afternoon, and was thankful to have exchanged the cramped attitude necessitated by the canoe, for the freedom of a house and the delights of pedestrianism. This harbour, along whose shores houses are scattered, was discovered in 1792 by Gray, the discoverer of the Columbia, but it was left for Lieutenant Whidby, of the English navy, to survey it in the ship *Dædelus*, and to give it the name it now bears. A heavy surf is always breaking over the bar, which has only 16 feet of water at high tide, so that it is unsafe for vessels to enter it without an experienced pilot. Nine-tenths of the harbour are bare at low tide, and this prevents it from attaining any commercial importance. It receives the waters of several streams, along whose banks good land is supposed to exist, but as they have not, with one exception, been explored, nothing positive can be said of the country adjoining them.

South of this lies Shoalwater Bay, which has an average width of three and a half miles, and a length of fifteen, and whose water is so shallow, even at high tide, that vessels have to pick out their channel from aloft. It is a famous spot for the cultivation of oysters and other shell-fish, and the larger number of persons dwelling along its shores are interested in these fisheries. The bivalves are of good size and well flavoured, and are by many persons deemed to be the best found in the waters of the Pacific. This bay is always frequented by thousands of aquatic birds, and during the running season by myriads of different species of fish, among which may be enumerated the cod, halibut, herring, perch, anchovy, smelt, rock-fish, shrimp, flat-fish, and salmon. Some of these are regular denizens of the place, but the larger number is not. When the fish commence to arrive, they are so dense as to cause the water to seem in a state of violent ebullition; and in the course of a few days they become so numerous that they crowd each other ashore, where they are pounced upon by flocks of gulls, fish-crows, pelicans, cormorants, mergansers, and other aquatic birds; but numerous as the latter may be, they cannot devour all, so that millions are wasted. Very little attention is paid to marine fish, owing to the difficulty of getting it to a market fresh, and nobody thinks of salting it. The Indians capture large numbers of herrings for bait, and perhaps some smelts, but the anchovy and other delicious species are only caught in very limited quantities when they first arrive.

The bay presents an active appearance when the boats are out fishing, for they scud about in white-winged squadrons, as if they were going through a series of sea manœuvres. Yachting is the great pastime with the dwellers along this harbour, it being to them what horse-racing is to other communities. Regattas are held frequently, and the owners of winning boats become the *haut ton* in masculine assemblages. From this point to Gray's Harbour isolated settlements are found, but all the coast country north of the latter is a *terra incognita* to the whites, except to a few daring hunters who have, at rare intervals, traversed a small portion of its great forests, and they report fine open valleys in some places, which are vast deer parks, and in which every species, from the lordly elk to the variegated or spotted deer, are numerous.

Taking passage on a small steamer at Gray's Harbour, I returned up the Chehalis, and landed at Claquato once more, thence took the stage overland for Puget Sound. The roads being muddy, the coach was often driven through the woods to avoid the almost impassable ruts; but the route there was not often agreeable to passengers, as the vehicle bounded over fallen trees, or was upset in a few places by the muddy condition of the paths chosen, or by coming into collision with trees placed at all angles. We were now in the forest, then in the so-called road; but whenever we reached the latter, we were compelled to carry long rails to pry the stage out of the deep holes into which it plunged every few seconds. The passengers did not, as a matter of course, enjoy this exercise very much, as they could not understand why they should pay a large sum for their fare, yet be compelled not only to walk more than half the way, but also to lift the empty waggon out of the mire every few minutes, as if they were hired men.

The journey, however, changed in character the second day, when Mound Prairie was reached, and from this point forth we had good gravelly roads, over which the stage rattled at a pace that was as comforting as it was unusual. This prairie derives its name from the large number of small mounds it contains, and whose origin has been the cause of much speculation among scientific men; but as no two could agree on the subject the matter is still open for consideration. These mounds vary from a few inches to 3 feet in height, have a circumference of from 10 to 100 feet, and extend over an area of perhaps ten square miles; but they do not enter the forest at any point. The largest, which has an altitude of 200 feet, embraces several acres of excellent land, and is covered with a coppice of evergreens, amidst whose shade a white cottage gleams. This mound has a historical character, for during the Indian war of 1855-6 it was used as a signal station by the Territorial Volunteers, and beneath its shadow a few of them made a charge on a large body of their dusky foes, and routed them so completely that they retreated from that portion of the country, and never showed a warlike front there afterwards.

The cause of these mounds, much as it might be a matter of scientific speculation, may be readily inferred from their form and composition. The late Professor Agassiz attributed them to the action of fishes now extinct, which built them for nests, while others assert that they are the result of the uprooting of trees. A little study and examination might have caused these theorists to have changed their opinion, for they were evidently produced by whirlpools in probably the Miocene epoch, when the Puget Sound Basin formed a portion of the great inland sea which extended from British Columbia to San Francisco. That they were not produced by fish is evident from the fact that they are confined to a very small area, and that they differ in form, extent, and altitude; and that they are not the result of the uprooting of trees would be deduced from the mode in which the forest grows; whilst, in contradistinction to these theories, the evidence of their being the result of strong eddies is apparent in their distribution, the materials of which they are composed—rounded pebbles of shales, schists, and sedimentary fragments—and their paucity of vegetation, for nothing thrives upon them but a species of fern (*Pteris aquilina*), and that symbol of meagre nutrition,—the *Pycnanthemum lanceolatum*. It therefore follows, that if they could have supported the economical fir in the past they could at present; but that they do not carries its own lesson, and proves that they could not have been formed by the uprooting of trees any more than they could have been built by fish. Tourists passing over this tract are surprised at the number and appearance of the mounds, and indulge in all sorts of speculations about their origin; but if they will attribute it to whirlpools in the misty past they will be apt to guess at the true theory.

From this point the stage passed alternately through plutonian forests, and over treeless prairies whose soil is so poor that it can only produce a puny growth of grass and a few vegetables; but they abound with the curse of the country—the pugnacious fern. They are useless for all purposes except to sustain in a state of semi-starvation a few sheep or mustangs for a month or two in summer. These light-soiled, gravelly plains are quite common throughout the western division, but in no instance have they been found available either for grazing or agriculture. Passing over these, a run of a few miles brought us into Tumwater, a pretty hamlet possessing some local interest from the fact that it was the first place in the Puget Sound Basin settled by Americans—that was only in 1845—and that it boasts a pretty waterfall which hisses out of a rocky bed gay with mosses and wild flowers, and furnishes an abundance of water to several lumber and furniture mills that line its course. A mile beyond this lies Olympia, the capital of the Territory, and through its broad and shaded streets the stage dashed at a high rate of speed, and after discharging the mail at the post-office, discharged its passengers at the hotel; but as they amounted to only three in number they caused little inconvenience to the host. This charming town, which has a population of about 2,000, is situated at the head of Puget Sound, on a narrow peninsula a mile and a half in length. The country surrounding it is heavily wooded, and the shores of the Sound are steep and bold until they reach within a quarter of a mile of the town, when they shoal suddenly, and stretching out, form a mud flat one and a half miles long at low tide. This is a great drawback to the commercial importance of the place, as vessels cannot arrive or depart except at high tide.

There are more newspapers published in this distant town than in any one on the continent having four times its population, for it boasts of two dailies and five weeklies. Churches and schools are numerous enough, and two libraries, containing over 6,000 volumes, aid in giving the people intellectual recreation. A pleasant vista may be enjoyed from any of the streets, as they are shaded with the broad-leaved maple, and each white cottage is surrounded by a garden brilliant with many-hued flowers. The scenery visible in every direction is also pleasing, as it combines the elements of gentle picturesqueness and stern grandeur. Facing the city is that beautiful body of water, Puget Sound, which is as tranquil as a lake, and almost as transparent as a mirror. On each side extensive forests stretch in an unbroken line to the horizon; the snowy crests of the Olympic Range are distinctly seen to the north, and to the east the towering, cloud-capped, white-shrouded Mounts Rainier and St. Helen's loom above all objects. The former is the highest peak on the North American continent, except Mount St. Elias, in Alaska, its altitude being placed at 14,444 feet. It presents an exceedingly grand appearance on a fine day, owing to the regularity of its outline, its cone-like summit, and its apparent proximity, although it is sixty miles away. When this scene is illumined by the soft rays of the evening sun, and activity is imparted to it by the many yachts, steamers, and stately lumber-ships that sail about, it would be difficult to find one to equal, or even to approach it, in its varied expressions of beauty.

CHAPTER IX.

A TOUR ON PUGET SOUND.

Area and climate of Puget Sound Basin—The town of Steilacoom—Beautiful prairies and tarns—Prairie flowers—Tacoma—A magnificent paper city—Seattle—The Territorial University—Educational matters of the Territory—A run among lumbering towns—Trees used for lumber and ship-building—Exports of lumber—Possession Sound—Magnificent snow peaks—A visit to the Niagara of the West—Indian fishing fleets—A curious system of fishing—Port Townsend and its surrounding scenery—Among the islets of the Washington Archipelago.

THE region north of Olympia, which is known as the Puget Sound Basin, lies between the Coast and Cascade Ranges, and extends northward as far as Fuca Straits, a distance of 120 miles. Its area is estimated at 12,000 square miles, the largest portion of which is heavily wooded with gigantic firs, spruces, pines, cedars, and some foliaceous trees, yet some large and fertile valleys and picturesque prairies are found in many parts of the forest. Coal is abundant, having been discovered in dense ledges from one end of it to the other, and a few mines, which yield over 100,000 tons per annum, are worked regularly.

The best land in the valley for agricultural purposes is that which borders streams, it being generally a deep alluvial deposit or a mixture of loam and vegetable mould, capable of producing grains, grasses, fruits, and roots. This is known in the vernacular of the country as "bottom land," and is eagerly sought by immigrants, as they clear and plant enough the first year to support them in comfort the next.

Tidewater land—that is, marshes over which the salt water flows at high tide—is also in eager demand, it being deemed very fertile, and superior to all others for producing vegetables, grasses, and roots, when it is ditched, dyked, and drained, while it has also been found adapted for the growth of cereals and the *Pomona.* It extends along the shores of Puget Sound for miles, and though largely taken up, yet there are many acres still open for settlement, and will be for several years to come, as the entire population of the Puget Sound Basin does not much exceed 25,000, five-sixths of whom are confined to towns and lumbering marts, so that the number engaged in agricultural pursuits is very small.

The so-called bottom land is occupied only when it is adjacent to towns or villages, except in limited cases, as the facilities for sending products to a market from distant points are too meagre and costly to make farming yield the heavy and prompt returns which the people there expect. The result is, that the greater portion of a score of fine valleys, which range from twenty to 100 miles in length, and from two to fifty in width, are still in a state of nature, and that no white person lives in an area larger than some Atlantic States or European kingdoms. This condition of things must soon change, however, for with the advance of railways and the spread of commerce, population is moving thither, and occupying the lands most convenient to the highways of travel. The entire area of the Puget Sound Valley is well watered by several streams flowing from both the principal mountain chains that environ it, but the largest, and the only ones that are navigable for steamboats, rise in the Cascade Range and empty into Puget Sound.

The climate of the region is like that of Western Oregon, it having but two seasons, the wet and the dry, the former lasting about five months, and the latter seven. The average temperature, according to the meteorological tables, is—Spring, 50°; summer, 63°; autumn, 52°; winter, 39°. The heat goes as high as 94° at rare intervals during the summer, but even then it is not unpleasantly hot, owing to the sea and snow-cooled mountain breezes which blow steadily during the day, whilst the nights are always cool enough to make blankets on the bed necessary to comfortable sleep. The summer is not literally dry, as generous showers fall occasionally, yet not to such an extent as to injure growing or garnered crops. In the winter the snow sometimes falls to a depth of 8 inches, but it soon melts away, and ice is seldom thick enough to afford the pleasure of skating. It never has a density to enable it to be cut and stored, so all that is used in the valley during the summer has to be imported from Nevada. The rain is sufficiently warm to enable roses to bloom throughout the winter, except in phenomenally severe weather. The fall of rain and snow for the months of the rainy season amounts to 34 inches, and the rainfall for the year to 53 inches, divided as follows:—Spring, 11·19; summer, 3·45; autumn, 15·82; winter, 22·54. According to the reports of the chief of the United States Hydrographic Survey, November, December, January, and February are the rainiest months, the average number of days in which rain falls varying from eighteen to twenty-five, but going as low as eight and six in March and April. According to an average summary, the number of clear days in the winter and spring is fifty-eight; foggy or misty, eleven; and rainy, 108. Three or four of the latter may be credited with a little snow, or snow and rain. At the southern section of Puget Sound the three months of winter average fourteen foggy, forty-five rainy, and thirty-two clear days, the rainfall being about 20 inches, and the average temperature 41° Fahrenheit. The spring averages five foggy, twenty-nine rainy, and fifty-nine clear days; rainfall a little over 6 inches. No rain of any consequence falls during the summer, and the thermometer ranges from 45° to 94°, the average being 63°. The autumn averages thirty-three clear and eight foggy days; temperature, 55°; rainfall, 14 inches. These tables furnish a palpable evidence of the equability of the climate, for the mean between winter and summer is only 24°. The result is that the country is exceedingly healthy, a fact which is proven by the Government report that only one in every 529 of the population dies of fever.

All the important towns in Western Washington are situated on Puget Sound, one of the most magnificent inland seas in the world, and probably the only one which commands such noble views of water, forest, and snow-capped mountains. It has been called the Mediterranean of America; but the metaphor, though good, is misleading, for while the European sea reveals only scenes identified with man and civilization, there all is primeval expansiveness and rugged grandeur. Hemmed in by dark green forests that extend in an unbroken mass from the sea to the far horizon in the east, and locked in the embraces of two mountain chains that vary from 5 to 14,000 feet in altitude, it presents throughout its entire length a panorama of wild and luxuriant beauty, unexcelled in its variety, for it includes every phase of scenic charms, from enchanting loveliness to awe-inspiring sublimity. Placid repose is contrasted with the most active energy, gentleness with vigour, and soft picturesqueness with stern majesty; yet all blend harmoniously together, and unite in forming a peculiar landscape, one almost without a peer. This beautiful sea has a length of 120 miles, a coast-line of 1,600, and covers an area of 2,000 square miles. It has as many windings among the forest as the Cretan Labyrinth had, but the main channel is direct enough, its deflection from a straight course being very slight. It contains several basin-like harbours, and these are generally used as sites for towns or lumbering mills, as the water is of a depth sufficient to enable vessels to anchor without paying out too much chain; for one of the complaints made against the Sound is that the depth of water is too great for convenience in anchoring, or getting under way promptly from an anchorage. The shores are so bold that vessels can haul alongside them and make fast to a tree, and be as safe as if they were in dry docks, for storms cannot reach them.

I commenced my tour on Puget Sound by engaging an Indian canoe to take me to Steilacoom, a picturesque town situated on a small bay twenty-four miles from Olympia. This place, which has a population of about 400, was once a prominent military post, but since the settlement of the disagreements between the English and Federal Governments concerning the islands in the Straits of Fuca, it has been abandoned. It was from there that General Harney dispatched Lieutenant Pickett, since famous as a commander in the Confederate Army, to capture San Juan island in 1859; and it was there also that the troops intended for his reinforcement, in case of trouble, were mustered; but, fortunately, diplomacy succeeded in averting bloodshed, and the braves of both nations fought no severer battles than verbal contests about which was the superior race, and which would finally own the island. The country back of the town is an open prairie decorated with fine natural groves, and profusely covered with gaudy wild flowers in summer. A chain of tarns, the largest of which is American Lake, glistens in the landscape, and adds much to its interesting appearance, as several are so crystalline that they reflect with the most perfect accuracy the snow-clad Mount Rainier, which is forty miles distant. To the lover of flowers the prairie would prove a perfect botanic Paradise, for it teems with the flora, the larger number of species being entirely different in colouring from their congeners of the Atlantic States or Europe, and not a few being different in the arrangement of their leaves and corolla. Out of 400 species which have been gathered in the Territory, 150 are indigenous to the prairies; and as nearly all of these are loud in tone, one may imagine what a brilliant appearance a plain presents when decked in its floral robes. The most prominent hues are crimson, pink, red, lilac, white, purple, and yellow (modest blue is rarely seen), and these I should infer were due to an abundance of heat and moisture and a generous soil. I made a small collection of the commonest flowers, and found by subsequent experience that they could be accepted as an index of the flora of all that portion of North-western America adjoining the Pacific Ocean. The handsomest flower that I saw was the rhododendron, a tree-like shrub bearing rich pink flowers, which grow in large clusters, and are as large as the azalea of the conservatory. It spreads over an area of a mile or two sometimes, and nearly always over several acres, and the result is that it produces a gorgeous effect, and gives the country a tropical appearance.

Another handsome plant, when in bloom, is the edible camass, which grows to a height of nearly 2 feet, and bears a crown of star-shaped flowers of a beautiful lavender hue, having a golden centre. Where this grows profusely the region is called a camass prairie, and is frequented in June and July by the Indians, who gather large quantities of the plant, and make its roots into a bread which is both palatable and nutritious. There are several varieties of this species, and two of them are famous for their rich purplish hue and graceful form; but an odd fact about them is, that while one variety is highly nutritious and fine flavoured, another is rank poison. The red-flowering currant, which is one of the first plants to bloom in spring, is probably the commonest flower in the country; yet it is a favourite in every garden, owing to its brilliant colours. Other varieties of this species have a corolla varying in hue from yellow to a pale rose and crimson. The mock orange (*Philadelphus*), the leontice, which grows to a height of 10 inches, and has white wax-like revolute flowers, the blue gentian, blue iris, larkspur, the claytonias, some of which remain in perennial bloom, the lucanthemum, with its broad white petals, the Carolina geranium, the wild lily of the valley, the montropia or Indian pipe, yellow violets, the helianthus or sunflower family, lupines, asters, the delphinum, œnethera and salvia families, gillias, which have flowers 2 inches in diameter and of varied colours, and grow in showy masses, and roses which thrive in both wet and dry soils are exceedingly profuse. The wild corn or Solomon seal (*Convaleria recimosa*), which is branch-less, and has a tall stalk, a leaf similar to maize, and white flowers, is highly prized on account of its delicious fragrance. The thrift or prairie flower, which looks gay in its robe of pink or rose colour, has very stiff petals like the immortelles. The early spring flower, with its pinkish flowers and stately mien; the erythroneum, with its brown-spotted leaves and straw-coloured bell-shaped corolla; the spring lily, one of the most showy of the flora; the wild cucumber, which has fragrant white flowers; the athusa, a new species of the *Umbelliferæ*, which bears white flowers and permeates the air with its rich perfume; the fritillaria, a new species of the lily; the fragrant red or yellow-petalled castellaja; and the yellow-speckled solidago or golden rod, loom prominently upwards among their numerous kindred, and attract the eye at once by their beauty and numbers. A flower called the *Pycnanthemum lanceolatum* grows profusely on hard gravelly soil, where nothing else but ferns could apparently live. It blooms early in spring, grows to a height of 8 inches, and bears heads of pink flowers. A very beautiful plant, the *Trelima grandiflora*, which bears cream-coloured flowers, grows abundantly near the coast, and a handsome spirea called the sea-foam, which displays white clusters of small flowers, does much to relieve the less showy shrubbery in adjoining coppices of their gloom. One of the most characteristic flowers of the forest is the *Epilobium*, rose bay, or fire-weed, which thrives where trees have been destroyed by fire, and its purplish crown does much to give animation to its dark surroundings. The ceanothus, which might be termed a small tree, is quite common in the woods, and bears white flowers. In passing through places frequented by this plant, the aromatic odour which it exhales is so strong as to give some persons a headache. Its leaves, which are large and glistening, are so rich in sap that when slightly rubbed they exude a juice that is thick and gluey in character.

One of the most disgreeable specimens of the botany of the region to encounter inadvertently in the forest, is a shrub from 3 to 5 feet high, with broad smooth leaves, reddish flowers, and covered with long stout thorns, which prove the sharpest of opponents. This is known locally by the suggestive name of the Devil's Walking-stick, and scientifically as the *Epinanonox horridum*—and horrid it proves itself to be to the incautious tourist or hunter, for if they come in contact with it, the thorns seem to pierce the flesh to the bone. The cryptogamous plants fit for house decoration are numerous, too much so to be agreeable to farmers; yet one species has an interest for all, if a statement made to me by a lady be true, that its seeds produce a liverwort one year, and the seeds of the latter the original fern the next year. This may be recognized by its comparatively small size, and having its central leaves *frons*, and the lower recumbent. The flowers of the eastern division of the Territory differ radically from these enumerated, and though many are showy, yet they do not compare in brilliancy with the western species. The principal spring flowering plants commence sprouting so early that they are more advanced in the latter part of February than their kindred on the Atlantic coast are in May. The sandy prairies along the sea-beach contain several species of beautiful plants not found in any other portion of the country. Judging from their looks, they are wanderers from a southern clime, which have come north to live among the hardy residents of the swamps, for they evidently prefer the showers and ruder climate of the north to the genial sun of southern latitudes.

Besides its flowers, the majority of these forest prairies are interesting from their profusion of animal life. They are largely frequented by the small field birds, and immense flocks of ducks, geese, cranes and herons, and clusters of swans make them their home for several months, while grouse and quail frequent their wooded borders. Deer are also common, especially the white-tailed species, which prefers the small prairie coppices to the dense forests, so eagerly sought by its congeners. Hares and squirrels, the mink, showtl, and an occasional black bear and panther, cross one's path during a gallop over them; but numerous as the quadrupeds may be, they are a mere nothing to the feathered creation.

After spending two days hunting in the neighbourhood with a kind farmer, I resumed my ramblings, and halted at Tacoma, a mere hamlet devoted to the manufacture of lumber, and distant ten miles from Steilacoom. The North Pacific Railway runs very near it, and this promises to raise the place into importance in the future, as it occupies an excellent situation on Commencement Bay, and is convenient to a rich agricultural section, called the Puyallup Valley. A town which was laid out within half a mile of it by the railway company was, when I last visited it, a most elegant affair on paper, with avenues, high-sounding boulevards, and commercial wharfs, but in reality it was only a mass of burnt stumps, felled trees, and piles of roots and clay scattered indiscriminately about. These were the necessary preliminaries to make it into a model city, however, and it may now be on the road to the goal predicted for it.

I left this place in a steamer so small that a waggish friend ashore kindly suggested to me that if I chewed tobacco I had better not change it in my mouth for fear of upsetting her; yet, small as she was, she possessed high speed, and soon landed me at Seattle, thirty miles distant. This place, which has a population of about 4,000 or 5,000, is the most important city in Western Washington, as three-fourths of the lumber and shipbuilding business of the Sound are concentrated within a radius of thirty-five miles of it, and it has communication by water with all adjacent ports possessing any importance.

One would scarcely think that a town so little known, and so comparatively small, could do the business it does, yet the number of steamboats, tugs, and large lumber-ships which frequents it prove that the estimates of its commercial transactions are not exaggerated. It has the honour of being the seat of the Territorial University, a large wooden building that occupies a commanding position on a hill, from which a view of Dwamish Bay, on which the city is located, the waters of the Sound, and the crests of the Cascade and Olympic Ranges are visible. This seat of learning is open to both sexes; but as it has no funds now with which to support a faculty, it is not largely attended, its corps of teachers being confined to one or two, and its range of studies to those generally taught in high schools.

The Government of the Territory is very exact about education, and all children between the ages of eight and sixteen are compelled by law to attend school at least three months in the year, and if their parents or guardians cannot pay for them they are admitted free. All time lost, through whatever cause, must be made up in the ensuing term or year; and the protectors of those children who do not comply with this provision are liable to a fine of 100 dollars. No books of a sectarian character are allowed into a school, nor can any denominational doctrines be taught; and any school officer who knowingly allows the introduction of these is liable to a fine of 100 dollars. The schools are supported by a tax of 4 mills on the dollar on all assessable property; by the interests on money obtained from the sale of school lands; and by fines imposed upon those who violate the law regulating licences for the sale of liquor, or keep bowling alleys and billiard halls. A paid territorial superintendent of common schools looks after the general educational interests of the country, and county superintendents examine teachers for the schools in their districts, and see that the school laws are complied with. It will therefore be seen that no effort is spared to make the rising generations as intelligent as education can make them. Private academies are found in every large town, so that the deficiencies of the public schools can be easily remedied by those who have the time and means.

Back of Seattle the country is heavily wooded, but along the course of streams it is comparatively clear. One of the most charming scenes in its neighbourhood is presented by the two tarns, Lakes Union and Washington, which are a couple of miles distant. The latter has a length of twenty and an average width of four miles, and being environed by forests, has a most romantic character. Coal-mines extend along its banks, and their product is shipped to Seattle by a narrow-gauge railway, whence it finds its way to California. It is supposed that this lake will, at no distant day, be made a fresh-water naval station by the Federal Government, as it has water enough to float the largest vessels, possesses coal and timber on its banks, and could be easily connected with Puget Sound by means of a canal, and at an expense of not more than a million dollars. The residents of Seattle are enterprising, industrious, social and intelligent, and hospitable to strangers. They support three or four papers, a fact which proves their attachment to political literature, for such journals are nothing if not politically controversial.

I engaged a passage there on the steamer that carries the weekly mail to the hamlets along Possession Sound and the islands of the Washington Archipelago. Leaving town at 6 a.m., the boat was soon threading its way among devious bays and harbours, being now in a basin-like cove, anon in an open sea twenty miles wide. The apparent interminable forests, with their gloomy hue and air of wildness, according in expression and colour with the murky sky, produced a feeling of loneliness at first; but when the morning sun dispelled the mists, everything assumed an air of cheerfulness, and the snow-clad towers of the Cascade Range, those

"Palaces where nature thrones
Sublimity in icy halls,"

seemed to spring suddenly in all their glistening whiteness out of the fog, and to illumine the landscape with their brilliant appearance. They appeared to be only a few miles distant, so that their forms were distinctly visible; the crest of the chain had many outlines, being peaked, serrated, dome-shaped, and columnar, while at other points they rose in terrace after terrace with as much regularity as if they were built by hand. The most conspicuous peaks were Mounts St. Helen's, Rainier, and Baker, the latter, which is still inclined to be volcanic, being rendered unusually prominent by the jets of smoke that issued from its summit. After a run of a few miles we could see dark clouds curling slowly out of the forest—an indication of the presence of man. These were produced by the smoke of lumber mills, which are scattered along the Sound for miles. The largest mill is at Port Gamble, a small town situated at the mouth of Hood's Canal, that having a capacity for cutting 100,000 feet of lumber per day. A large fleet of vessels is constantly seen in this port, and that gives it, at a distance, the appearance of being a large city. All these lumbering towns are owned by wealthy firms, and they allow no persons in them but such as they employ. Neither drinking nor gambling saloons are permitted; but a church, a school-house, and perhaps a library, are actively supported. The trees generally used for the manufacture of lumber, and for shipbuilding, are the red and yellow firs and the spruce, as they form the principal part of the forests, and attain a height of from 200 to 400 feet, and a diameter of 15 feet. The Territory exports timber to the value of 3,500,000 dollars per annum; but in this may be included spars, ship knees, shingles, laths, and kindred articles. The region is probably the greatest lumbering mart in the world, and will, in the future, undoubtedly be the great shipbuilding section of the continent, owing to the profusion of trees and coal, and the abundance of iron in the neighbouring State. Vessels built there already have a high reputation for speed and finish, and after several years' trial it has been found that the firs of the country are equal to the acidulous oak in durability, and superior to it in retaining fastenings. The Territory already owns over 200 ships and steamers, which are considered second to none in appearance and seaworthiness, and the number is increasing rapidly.

After calling at a few of the lumbering ports, the steamer headed for Whidby Island, locally famous for its large herds of spotted or variegated deer, its numerous tarns, and the fertile character of its soil. Passing this, it sped into the lovely bay or arm called Possession Sound, and soon stopped at a little village called Snohomish City, which is situated twelve miles above the mouth of a navigable stream of the same name. I left it there, as I intended visiting the Snoqualmie Falls, the largest cataract in the Territory, and known as the Niagara of the North-west, which was some forty miles inland. Securing a canoe, and two Indians to row it, I placed a stock of provisions aboard, and was soon afloat, as I was anxious to cross a series of turbulent whirlpools, known to the red men as *Skookum Chuck*, or Strong Water, before night set in. After leaving the hamlet we saw few houses, and those we did see were the rough mud-plastered log cabins of the pioneers. Our onward course required the most careful attention of the boatmen, as we often passed between huge crags around whose base the water boiled and whirled in a seething mass of foam, and in other places the current was so strong that we were compelled to hug the shore and use poles and the pendent boughs of trees to make even the most snail-like advance. After the first day we met no signs of human habitations, and the only indications of life around us were the short sweet notes of the little forest rambler, the pewee, or the sharp scream of the wild cat and panther. This droning solitude seemed oppressive, for not a word was uttered by the dusky statues that mechanically plied the paddles from morning till night, except to answer an occasional question by the affirmative grunt "*Uch,*" or the negative "*Halo,*" or "*Wake.*"

We were compelled to land every night to cook our food and make a camp; but the latter consisted of no greater labour than to throw a blanket on the ground for a bed. By noon of the third day we came to a series of boisterous, foaming eddies that extended over a distance of seven miles, and to pass these we had to ply pole and paddle with the utmost vigour. By making herculean efforts we managed to crawl over them in eight hours; but once past and we had tranquil waters until we came within hearing of the deep roar of the falls, which were now two miles distant. The large space over which they can be heard is due to the acoustic properties of the surrounding woods, and the echoes of the low rocky hills beyond them. The resonance of these forests is something marvellous, and on first acquaintance rather startling, as an ordinary tone of voice is heard several yards away; a laugh rings in vibratory undulations for at least an eighth of a mile; while the scream of the wild cat is audible a mile off.

Having found all farther progress by water checked by masses of trap rock, which were hurled together in the wildest confusion, we pushed the canoe ashore and made a comfortable encampment of boughs under the umbrageous shelter of a spreading spruce that must have seen several centuries of life. Having prepared supper, and partaken of it with a keen relish, the guides led me through a forest so dense that it only permitted a few straggling rays of the moon to pierce its inky blackness in a few places. Our passage through it proved exceedingly difficult, as the shrubbery, matted as usual, tripped us quite frequently, and sent us sprawling on all fours into apparently unfathomable masses of briers, while the tall and elastic undergrowth lashed our faces keenly. It took us two hours to reach the falls, as we were compelled to make many windings, and our only guide was their vibratory thundering. When I reached them, however, my fatigue disappeared immediately, for my surprise was as great as it was pleasing. I had expected much, but such a towering height, such rude grandeur, such a volume of water, and such weird beauty I was not prepared to encounter in this wild retreat. The scene was actually sublime, and bewildering in its variety. The water poured out of a deep canyon in a convex body of seething foam, and fell on the black, shattered crags below in a yellowish-white mass of glinting globules. After gazing at the magnificent picture, with its strong effects of light and shade, for half an hour, I returned to camp, and throwing myself on the ground beside the bright fire, listened in silence for some time to the rumbling music that rolled towards me in heavy volumes. Being struck by the wildness of the picture surrounding me, I asked my guides to go deeper into the woods and chant the death song of their tribe, that I might make a comparison of melodies characterized by simplicity and primitiveness, and the opposite of each other in colour and expression. They promptly complied with my request, and from out the plutonian depths of the forest issued their low wailing song of sorrow, and this, mingling with the ponderous monotone of the falling water, produced an effect so intensely striking that it seemed more like a dream than a reality in life.

After singing for half an hour in a deep Gregorian tone, which harmonized with the weird scene and the wild and massive melody of Nature, they returned to camp, and a few minutes later were rolled in their blankets and deep in the land of Somnus. I was so impressed with my surroundings that it was far past midnight ere I fell into a restless slumber, and then only to dream of strange and impossible waterfalls and stranger music. We were astir early the next morning, and after breakfast again visited the falls, and while they seemed as grand as they did on the previous evening, yet the misty haze of the night, which threw them into a ghostly shadow, was missed. While loitering about them, one of the guides told me that they were the scene of a tragedy in Indian wars many years ago. A band of Snoqualmie Indians having encamped near them, a mountain tribe attempted to surprise it by running down the river in the dead of the night in canoes; but not being acquainted with the currents, all were carried over the falls, and the first announcement the sleeping encampment had of the proximity of its foes was their fierce shrieks as they were being dashed to death on the huge crags below. Not one escaped, so that the warriors of the tribe were destroyed in less than a minute. The fortunate band, having scalped the dead, returned to its own village amidst joyous acclamations, and its leader became chief of the tribe, as it was supposed that he had great "medicine," or power, to thus thwart his foes without even knowing they were near. This incident related, we re-embarked, and striking into the current were carried onward with such velocity that we reached Snohomish City in seven hours, although it took us three days to go up. On making inquiries at this place, I learned that the falls were 80 feet wide and 270 feet high, so that they are entitled to all the laudations bestowed upon them by the few who have gazed on their beauty.

I was fortunate enough to find a small schooner bound for Port Townsend at the village, and at the request of the captain I took a free passage with him. Half an hour after going aboard the sprightly craft was under headway, and gaily bounding o'er a slightly ruffled sea at the rate of eight knots an hour. While passing between some wooded islands, we came upon a large fleet of Indian canoes bound for the fishing-grounds, and a little later were among another party of swarthy Masaniellos, who were catching herrings in immense quantities by simply pushing a long board, covered with rows of nails, into the water, and hauling it up laden with spoil, for nearly every nail contained a herring. This fish moves in immense shoals over the Sound in June, yet few persons catch any, except the Indians, and they use them principally for bait. The only species that are caught in any quantities by the whites are the salmon; but I only know of one firm engaged in preparing them for market, although they may be captured by the million in nets or weirs. The Sound, in fact, teems with edible fishes, yet, excepting the few taken by anglers and red men, they are allowed to remain where Nature placed them. The perch, carp, sturgeon, rock-fish, flounder, plaice, and many other varieties are numerous, and as many of them take a hook or a trolling-spoon, they afford much amusement to the lovers of the rod.

The laziest system of fishing that I ever saw was that employed by the Indians in capturing the golden-barred perch, and that was simply to push their canoes among a school and keep them there until the fish filled them of their own free will; and this they generally did in a short time. As this is not intended for a fish story, it may be as well to explain how it is done. This species of perch arrives in myriads as early as May, and tarries for several months. In swimming it keeps so close to the surface that it may be taken with the hand, or it may be captured, until one is weary with hauling it in, by using a hook baited with salmon-roe. Its strangest characteristic is, however, its habit of leaping high out of the water every few seconds, and the Indians, having noted this, merely push their canoes among them, and keep with them until enough have leaped in to make a load, when they pull ashore, but soon to return for another cargo. The large fleets of canoes to be seen on the Sound at a time during the fishing season, and the picturesque costumes of their occupants, give it an appearance of activity most pleasing, as it contrasts with the silence of the woods.

After a pleasant run, one which I enjoyed very much, I reached Port Townsend, and there bade adieu to my kind host. This town is the most northerly in Puget Sound, and is the custom-house station for the district. It has a population of nearly 1,000, boasts a newspaper, several churches, and a fine marine hospital. The commercial part of the place is situated on the beach, but the residences are perched on a high bluff which commands some noble views. This town was formerly notorious for its "beach-combers," men who died as th[illegible]ived, by vice and the revolver; but they have long since pa[illegible] away, and their place is occupied by quiet, industrious citizens.

The two most disagreeable objects appertaining to the town now are the numerous mosquitoes in summer, and the constant presence of a colony of Indians, who are anything but models of virtue. The most important individual among the latter is a sturdy type of the savage called the Duke of York, who has the honour of being married to two wives called Jenny Lind and Queen Victoria, and is the father of two sons known as General Jackson and Thomas Benton. Nearly all the leading men of the so-called "tame Injuns" of the northern part of Puget Sound bear the titles of the royal family of Great Britain, but none of them ranks higher than a duke. Napoleon is a common name, being exceeded only by the cognomen of some popular American general. These royal titles, which were given in a sort of grim humour by pioneers who had no reverence for either royalty or nobility, are highly prized by those who bear them, and some proudly boast of them. The Duke of York is the great aboriginal personage in Port Townsend, and he affords much amusement to visitors and citizens. He is an important factor in the parades of Independence Day, and as he drives past in an old ox-cart, arrayed in all the panoply of a rusty cavalry sabre and a useless revolver, he looks more consequential than ever did General Boum. He is not without a sense of humour either, a most novel characteristic in a red man; for having been put in jail one night for lying drunk in the street, he retaliated some time after by putting the constable who had arrested him in the same receptacle, during one of the latter's unconscious sleeps on a public thoroughfare, and saw that he was fined ere being released. That joke has increased his fame, and few visitors to the town leave it without desiring to see him.

The scenery around Port Townsend is very interesting, as the forest is dotted with prairies on which the showy rhododendron grows in the most wayward luxuriance, and two snowy peaks, Mounts Baker and Olympus, seem close by. The former has an altitude of 10,814 feet, and the latter 8,100; and as the snow line on these, as on nearly all the pinnacles of the Cascade Range, commences at a height of about 6,000 feet, they show more snowy surface than mountains in Europe which are 2,000 feet higher. The rainfall in the northern section of Western Washington is greater than in any other part, it being as high as 130 inches at Cape Flattery at the mouth of Fuca Straits; but this quantity is greatly reduced a few miles inland from the ocean. During the summer it is comparatively light, owing to the prevalence of cool dry currents which blow from the north-west.

Leaving Port Townsend in a small trading sloop, I went to Lopez Island, thence made canoe excursions amongst several islands of the Washington Archipelago. Some of these islands contain a few settlers, who are principally engaged in sheep farming, but the larger number is unoccupied by aught save deer, grouse, and wild fowl. Nearly all have land fit for cultivation; but until population requires more elbow-room, they will not be settled, owing to their distance from a market, and the want of rapid means of communication. They would make excellent sheep pasturages, as they are free from destructive wild animals, and luxuriant grass, the wild pea, and edible plants thrive at all seasons. After wandering among them for two weeks, I returned to Port Townsend, thence took the handsome mail steamer that runs to Olympia, and from there I went back to Portland by stage, train, and boat, after having made a tour delightful in its novelty, and through a country which has few peers in magnificent scenery, in its wealth of coal and lumber, and in the fertility of those parts of its soil adapted to agriculture.

CHAPTER X.

UP THE COLUMBIA AND THROUGH EASTERN WASHINGTON.

Cape Horn, Rooster and Castle Rocks—Multnomah Falls—The Cascades of the Columbia—A famous block-house—The grandest river scenery in the world—Dalles City and the dalles of the Columbia—Volcanic earth blisters—Aspect of the country—Hell Gate and scenery of the Upper Columbia—Indian villages—Umatilla—Wallula—A primitive railroad—Walla-Walla City and Valley—Products and climate of the region—General characteristics of Eastern Washington—Principal valleys—Wild animals met with—Eccentric scenery—Indian legend of the origin of caves—A trip on the Snake River—Indian graves—Religious ceremonies of the Smohollas—The Palouse, Spokane, and Okanagane Falls—Lewiston, Idaho—Running the rapids.

I TOOK passage at Portland on one of the handsome steamboats of the Oregon Steam Navigation Company that plies on the Upper Columbia, as I intended to visit Eastern Washington, about whose rocky towers, terraces and tarns, caverns and cascades, I had heard so much. A run of twelve miles down the picturesque Willamette River placed me once more on the Columbia, whose placid bosom was then so clear that it reflected the trees along its margins, the distant snow peaks, and the blue sky overhead so distinctly that the boat seemed to be floating over them.

Our course was margined everywhere with the dense forests, amidst whose foliage white farm-houses gleamed at intervals. The first prominent object seen in the landscape was Cape Horn, a long massive ledge of basalt having an altitude of 220 feet, and the appearance of a huge organ at a distance, owing to the many deep crevices worn in its face by rivulets which flow over it. From this point north the shores became bolder, and rose in pinnacles, domes, terraces, and columns to a height varying from 100 to 1,000 feet. Two erratic basaltic crags, called Rooster Rock and Castle Rock, the latter over 800 feet high, loomed up apart, and overshadowed the low hills near them. Cataracts were also numerous; but the most interesting were Multonomah Falls, which plunged downward a distance of 750 feet in a ribbon of white; but long ere they reached their craggy bed, or the heavy forests far beneath, they were dissolved into snowy drops of spray, which were whirled in every direction by the lightest zephyrs. After uniting below they ploughed their way in a tortuous course through moss-lined banks and tangled shrubbery, until they made their final leap into the Columbia in a broad and thin sheet of silvery water.

There was something exceedingly lovely about this miniature Niagara, as it seemed like an enchanted scene, owing to the vivid emerald hue of the luxuriant grass, and the density of the coppices of young firs and cedars which grew in wayward luxuriance about the base of the first leap. These made one of the most picturesque dells imaginable—one so fairy-like in character that a person would naturally select it as the abode of those weird and pleasant nymphs of the forest, the dryads and hamadryads; for what more could they require than a charming spot which is never disturbed by aught save the notes of the wood-thrush and yellow bird, or the purling cadenced monotone of the falling water? while around, on all sides, are scenes that represent many varieties of landscape beauty. Continuing my way up this noble stream, a short run placed me at the famous cascades of the Columbia, a series of boisterous, snow-white rapids, only a few yards in width, but having a length of six miles and a fall of 60 feet. Their shallowness interrupts river navigation, but a short line of railway runs close to their side, and keeps communication open with the steamers that ply on the Upper Columbia. The road passes through a coppice of bright-leaved foliaceous trees, above which looms, to a height of 4,000 feet, fir-clad mountains. A block-house, in which General Philip Sheridan first fleshed his maiden sword in a contest with the Indians, is a prominent landmark on the route; and spots in which General Grant and other commanders famous in the Civil War were encamped in former years, are pointed out by those acquainted with the early history of the country.

Re-embarking on a steamboat near the upper end of the cascades, we were soon threading our way amid fir-clad islands and bare, sooty islets of trap rock, and after coursing through this miniature archipelago for a short time, the steamer turned her prow into the main channel, and sped onward at a speed of twelve miles an hour. The scenery visible from the deck was exceedingly grand, and so varied that the eye never wearied of the kaleidoscopic pictures that unfolded themselves in rapid succession. The river spread out into a large lake sometimes, then contracted to a space of 300 or 400 yards; mountains, bare or fir-clad, rose directly upward from the water's edge to a height of 5,000 feet; and, in other places, ledges of basalt arranged in terraces, often to the number of eighteen, extended for miles with as much regularity of outline as if they had been erected by the hand of man. The scenery was majestic in its literal sense, yet it was not in places devoid of familiar gentleness. It may safely be stated that no river in the world, the Nile perhaps excepted, can equal the Columbia in variety and grandeur of beauty. The Rhine in comparison with it is only a rivulet, and its most famous heights are only hillocks compared to the stupendous pinnacles and chains that stretch for miles along the shores of the great river of the West. The Mississippi even, grand as it is deemed to be, cannot approach it in any element of scenic charms, for its banks are, as a rule, low, and to me uninteresting. The Missouri may equal it for a very short distance near its source; but taken as a whole, the Columbia may be said to have no rival in its numerous attractions. What river but this can show mountains a mile high rising perpendicularly from the water's edge? terraces that extend for a distance of 300 miles along its banks, at an elevation of from 100 to 1,000 feet? towering crags that loom up apart to a height of 900 feet? trees that have an altitude varying from 100 to 300 feet? and an outline of its own that spreads out in places into a lake six or seven miles wide, or contracts into a space 40 or 50 feet in width? None; hence it stands pre-eminent in its sublime grandeur. An interesting feature in the landscape as we moved northward was the appearance of large extents of sunken forests, which had been buried in a landslide.

After a run of sixty miles from the cascades, the steamer stopped at Dalles City, which is the head of navigation on that reach of the river, and the passengers disembarked. Those who were going north entered a train in waiting, and were carried over a portage fifteen miles long, where navigation is resumed; but as I wished to see the surrounding country I stopped over.

This city, which has a population of 2,000, is the *entrepôt* for all goods passing up and down the Columbia River, and is, therefore, quite an important place. It is in the midst of a fine grazing country, and thousands of cattle and horses may be seen browsing on the plains beyond it. The paucity of trees seems rather odd at first, after being acquainted with the gigantic forests of the western divisions, for none are visible except those on the distant hills, and a few poplars, willows, and alders that margin the streams. The fences, what few there are, and the walls or embankments, are made of trap rock, and some houses are built of the same material. A feature of the landscape adjoining the town is the large number of mounds or volcanic earth blisters which extend over a large area of country, and give it the appearance of being a series of hillocks. I visited the dalles of the Columbia, the spot from which the town takes its name, and found that the entire volume of the river was forced into a space a few feet wide by adamantine walls of trap, whose sooty hue contrasted strongly with the roaring, seething, angry water. A large village of Indians was encamped near it, and its occupants were very busy in catching, cleaning, and smoking salmon, it being then the running season. The almost naked males, spear in hand, were perched on the rocks, or on wooden stands near the falls or dalles, and vigorously darting their tridents into the struggling mass of bright-hued fish beneath, and hauling them out every few seconds, for it was impossible to miss one. Boys were placed at small cascades with scoop-nets, and they also captured large numbers. The scene was full of life and motion, and made a pretty picture, with its combination of dark rocks and white water, active men, leaping salmon, merry children, and bustling women. All the Indians dwelling along the shores of the Columbia depend principally on salmon for food; hence their wigwams may be seen pitched on its banks for hundreds of miles, while the inmates are engaged in fishing, horse racing, or gambling.

Having spent a couple of days in the vicinity of the dalles, I took the train to Celilo, fifteen miles distant, and there embarked on a small, light steamer that ran to the head of navigation on the Snake River, in Idaho.

The first interesting object to attract attention after leaving the wharf was Hell Gate, a violent rapid produced by the compression of the stream into a narrow space between two mountains of huge rocks, whose shores were so bold that I was enabled to touch one with my hand as the boat laboured past it. Clearing this point, the river spread out to a width of 600 or 700 yards, and assumed a placid aspect for several miles, when brawling cascades, some of them five miles long, again appeared, and continued to appear at intervals for a distance of nearly 200 miles. Their current moved with such velocity that the steamer had to strain every nerve to cross them; and the officers had to keep at their posts, as the channel was only broad enough in places to allow the boat to pass through, and any slight deviation from its course would have sent it headlong into masses of dark crags. It may seem dangerous to cautious tourists to pass these rapids, yet so experienced are the pilots that no accident has occurred on the river since steam was first employed in its navigation. The scene ashore was always interesting, as ledges of trap rose in terraces above each other to a height of from 200 to 800 feet, and beyond them rolled undulating, treeless plains, which were clad in a garb of perennial grass, the so-called bunch grass, and were dotted with large herds of horses and horned cattle. Houses were seen at intervals, but they were far apart. Where the river was wide and the banks low a glimpse of the snowy Mount Hood could be seen occasionally. No life was visible on the water, except the numerous flocks of ducks, wild geese and their goslings, swans, and unwieldy cranes and herons, if I except one or two shovel-nosed canoes paddled by a solitary red man. Eccentric crags, the result of erosion, loomed up on some points of the shore to a height of 300 or 400 feet, and broke the sameness of the terraces. The most prominent of these are named according to their form of outline, one being called Mill Rock, another Castle Rock, a third the Skull Cap, a fourth the Two Sisters, a fifth Monument Rock, and so on for hundreds of miles. All these are pointed out to passengers by the genial officers of the steamer, and such interesting incidents as may be connected with them are related; so that these unpretentious, manly fellows act both as officers and *ciceroni*. A trip with them is a real pleasure, as they consider no kindness too great to enable the passengers under their charge to enjoy themselves. As we moved northwards the hills and terraces became lower; Indian villages, made of straw mats, appeared frequently close to the water's edge; and deserts of artemisia, linosyris, and kindred shrubs supplanted the nutritious *graminæ*.

The first halt was made at Umatilla, a hamlet of 200 inhabitants, which is used as an *entrepôt* for the products sent to Portland from the agricultural region surrounding it. For a wonder no newspaper was published there, though it boasted, as nearly every hamlet in the country does, a telegraph office, so that it was not entirely devoid of the news gossip usually furnished by journals. The boat stopped there that night, having made a run of ninety miles against a current that ran from four to eight knots an hour; but at daylight the next morning it was off again, with an increased list of two passengers, which made the total about fifteen.

The passage up the second day revealed nothing new in the landscape, except that islands averaging from a few acres to fourteen miles square, and covered with gaudy flowers and deciduous shrubbery, appeared at intervals, and that the wooded crests of the Blue Mountains peered through the clouds far in the eastern horizon. Wild fowl were again met with in immense numbers, and small packs of prairie wolves were occasionally seen hunting along the shore in search of dead salmon, or any edible offal that might have been cast up by the miniature waves.

The next stoppage was made at Wallula, a post town and shipping point claiming the distinction of supporting neither lawyer, physician, nor minister, and only one school-teacher. It is 240 miles from Portland, and may be called the head of navigation on the Columbia proper, as no other hamlet is met with until Idaho is reached.

I went ashore there, intending to go to Walla-Walla, in Eastern Washington Territory. On landing, I was informed that the stage had left in the morning, and that the only means of reaching my destination was to hire a farm waggon, or secure a seat in a goods truck attached to a miniature train that ran fifteen miles into the interior on a wooden line of rails. Having secured an interview with the president, secretary, conductor, and brakeman of the road, he informed me that he would book me as a passenger on the payment of 2 dollars, and that sum being paid, I was placed on some iron in an open truck and told to cling to the sides, and to be careful not to stand on the wooden floor if I cared anything about my limbs. I promised a strict compliance with the instructions, and the miserable little engine gave a grunt or two, several wheezy puffs, a cat-like scream, and finally got the car attached to it under way. Once in motion, it dashed on at a headlong speed of two miles an hour, and rocked like a canoe in a cross sea. The gentleman who represented all the train officials did not get aboard, but told the engineer to go on and he would overtake him in the course of an hour. Before I had proceeded half a mile, I saw why I was not permitted to stand on the floor of the truck, for a piece of hoop-iron, which covered the wooden rails in some places, curled up into what is called a "snake head," and pushed through the wood with such force that it nearly stopped the train. After this was withdrawn the engine resumed its course, and at the end of seven hours hauled one weary passenger, with eyes made sore from the smoke, and coat and hat nearly burnt off by the sparks, into a station composed of a rude board shanty, through whose apertures the wind howled, having made the entire distance of fifteen miles in that time. The route of this famous railway ran through a sandy alkaline desert, capable of producing nothing but rank wild sage and kindred useless shrubs; hence, houses were scarce, and those seen were perched on the banks of some stream. Life was active enough there, however, for immense prairie schooners, as the waggons are called, drawn by teams of seven or eight pairs of mules or horses, or ten of oxen, wound in long serpentine lines over its bluish surface; and some of their drivers had the temerity to challenge the president of the railway line to run a race with them in his old machine; but he scorned their insinuations, and kept quietly walking beside his train.

I found a farmer's waggon at the station bound for Walla-Walla, and was furnished a seat in that on condition that I drove the team while the owner slept, a proposition I gladly accepted; but I soon repented of my bargain, as every driver I met who had any sense of humour in him began to make fun of my "stove-pipe" hat, and to suggest that I ought to take my first lessons in driving behind donkeys. The *badinage* was, as a rule, so original and witty that I had several good laughs at my own expense; and I found after awhile that the chaff was richly merited, as my black broadcloth coat was one mass of burnt holes in the back, and my silk hat looked like a sieve. I did not bless that railway, perhaps!

I arrived at Walla-Walla, however, in safe bodily condition, and without any greater inconvenience than being severely stared and sometimes laughed at as I drove through the streets to the hotel. When I alighted there a party of friends crowded around me, and commenced roaring, slapping their thighs, and turning me around to have a look at me; and the facetious ones began to congratulate me on my "holey" appearance, my spotted raiment, Jehu-like qualities, and such other terms as could express their sense of humour, until the landlord quietly led me away from the boisterous group, and invited all to follow and join in a toast, an invitation which was promptly accepted. I am glad to be able to say that this eccentric railway has since disappeared, being superseded by one much more desirable.

The city of Walla-Walla—every little hamlet in the West is a city—is the largest town in Eastern Washington, its population amounting to about 3,000. It does a large business, as it is the supply depôt for an extensive area of country, and the *entrepôt* for all goods and products coming overland from Idaho by way of Lewiston. The valley of which it is the capital is the most fertile region in Eastern Washington, nearly its entire area of 1,000,000 acres being adapted to the growth of wheat, barley, rye, oats, maize, hops, sorghum, tobacco, apples, pears, peaches, grapes, and all the tuberous roots, including sweet potatoes and the smaller vegetables. Its wheat is said to equal the best produced in Sicily, and to be much like it in character. All raised is in active demand, owing to its density and fine flavour, and brings the highest market prices. Such portions as are not specially fitted for the growth of cereals make excellent pasturage, being profusely covered with the perennial bunch grass. The northern part is a series of low, rolling terraces, and these are covered with cattle to such an extent that the herds look like large coppices at a distance. Where the terraces rise into hills they make fine orchards and vineyards, owing to their being well watered by the melting snows on the higher peaks, and well drained by their gentle slopes. The valley is watered by the Walla-Walla, Tucanon, and Touchet Rivers, and several minor streams, which afford good power for mills and manufactories. The only serious drawback to the region is the absence of wood fit for fuel; but that is abundant enough on the Blue Mountains, some fifteen miles distant. The wool trade is the most prominent industry of the valley, over one-fourth of the wool product of the Territory being raised there. A woollen mill is in operation in the town of

Dayton, and its goods are highly esteemed, owing to their fineness, density, and general excellence.

The temperature of this valley will give an idea of that of the greater portion of Eastern Washington, and prove its equability. According to the meteorological tables the mean temperature of spring is 52°; summer, 73°; autumn, 53°; winter, 34°; yearly mean, 53°. The annual rainfall is about 18 inches, most of which falls in winter and spring. Snow falls from December to March at intervals, but not in such quantities as to check travel, and ice is formed as early as November; but though the nights may be rather cold sometimes, the days are warm and sunny, the thermometer often ranging as high as 70°. The air is clear and bracing, and is deemed to be well adapted for consumptive persons.

There are three towns in the valley besides the capital, namely, Waitsburg, Wallula, and Dayton; but as they have been started only a few years their population is limited. Good land in their vicinity commands from 5 to 20 dollars per acre; but grazing ranges may be obtained for a mere nothing, comparatively speaking. The region abounds with game, and every stream is stocked with salmon-trout, so that it is always capable of affording amusement to the lover of field sports.

North of this, the entire area of Eastern Washington might be denominated a vast undulating plain marked by deep canyons, chains of low hills, rapid rivers, numerous lakes, many caverns, eccentric rocky needles, domes, and columns, and glacial ridges. It is essentially a grazing country, yet good arable soil may be found along the courses of streams; and where the land is not too sandy and alkaline, it yields good crops when irrigated. The expense of this system of cultivation prevents it from being adopted, however, and it is not probable that it will be employed until the population is much larger than it is at present.

In looking at the country from a high mountain it seems almost perfectly level, as the only prominences on the surface are the wooded foothills which jut far out on the plain at such a slope that they would seem to have been planed, grooved, and forced downward by glacial action. The principal vales, or rather deep prairies, are the Palouse, Klikitat, Kitetas, Spokane, Yakima, and Colville Valleys, which are watered by several streams having a total length of 700 miles. In these sections cereals and fruits are raised; but the majority of the settlers are engaged in stock-raising, and cultivate only enough ground to supply their families with food, as it would not pay to transport agricultural products long distances to a market. Their cattle roam abroad unattended, except in severe winters, when they have to be fed. A serious disadvantage to all this section is the paucity of wood, for, with the exception of those amantaceous trees that border streams, none is found below the higher ranges of hills, and they are frequently from ten to thirty miles distant from settlements. The population of Eastern Washington, with its large area of nearly 40,000 square miles, does not exceed 15,000, more than one-fourth of which is confined to towns and trading stations.

The scenery of the country is confined to one character—savage rudeness toned down by the pastoral aspect of the plains. In some places basins, which are several miles in circumference, and have the appearance of being extinct craters, are met with; and in others, lakes, varying from two to thirty miles in extent, occupy the sites of volcanic peaks, which fell inward when the fires became extinguished. Along the course of several streams, such as the Yakima and Palouse, rocky ledges 500 feet high may be seen; and where water has passed over the trap, it has worn it into innumerable caverns, towering pyramids, and needles of various sizes, which stand singly or in irregular groups, while dark and shattered precipices, several hundred feet deep, extend for miles in gloomy barrenness. These are enlivened occasionally by the song and spray of foamy cataracts, the chattering of swallows, the screaming of hawks, and the chirping of a few small birds; but otherwise they are as silent as the grave. The effect of glacial action is seen near the foothills of the Cascade Range in the grooved moraines and *roches moutonnées*, which are quite numerous; and their appearance would indicate that the glaciers moved from the north-west to the south-east. The prevalent rocks are trappean in character, but they are superseded in some places by gneiss, conglomerates, and quartz, the latter being largely gold-bearing.

The animals most frequently met with are the badger, which is exceedingly common, sage and prairie hares, ground squirrels, foxes, and the cayote or prairie wolf. The deer, mountain sheep and goat, and other game quadrupeds are found on the Cascade Range and adjoining chains, and herds of antelopes browse on the lower plains. The sage cock is encountered amidst the artemisia, the blue grouse in the woods, and the streams teem with fish. The lakes adjacent to caverns are frequently bare of trout, owing to their depth and alkaline water. The Indians have a tradition that these caverns were produced by the wife of a chief who had been turned into a mouse for her wickedness, she having determined to undermine his land, so that it would all fall in or be overflowed by water; but being caught at her nefarious work, she was expelled the country by the medicine-man. Before going away, however, she was able to make twenty lakes; and to prevent their being of any use to her former lord, she ordained that they should never contain either fish or fowl.

After travelling over the country as far as Yakima City—another mere trading post—and north to the grand *coulée* of the Columbia, I returned to Wallula, and again moved up the Columbia.

In a little over an hour after leaving town the steamer entered the Snake River, the largest tributary of the Columbia east of the Cascade Range. This was much more rapid than the other, owing to its more compressed space; and brawling cascades were numerous. The shores sometimes decreased into terraces a few feet high, then suddenly reared up into mountains having an altitude of several hundred feet. Indian villages became more numerous, and not a few dusky warriors ran their mustangs on level stretches, as if they were trying their speed with that of the boat.

Their graveyards were also common, though all were small, it being the custom for each of the tribal bands to have its own cemetery when convenient. No white tombstones marked the last resting-place of the rude children of the forest, and the only indications of their presence were long poles surmounted by the skins of mustangs killed for the purpose of carrying the braves to the great hunting-land beyond the grave. Deserted *tepees* were frequently seen, and on the beach beneath them the small walls erected by the red men to produce "dead water" in the river, so that they might capture salmon there during the running season; for it is a well-known fact that this fish will do anything to avoid currents, and the Indians, availing themselves of this characteristic, capture large quantities in the artificially-produced smooth water.

During the evening we saw an assemblage of red men ashore, dancing, shouting, and beating a drum, and on inquiry I learned that these were known as Smohollas or Drummers, a new religious sect which had recently been organized by a wandering chief named Smoholla. His doctrine was that a drum should be beaten every morning and evening, commencing with one on Monday, and increasing to seven on Sunday; that the tribe should dance and sing and worship the Great Spirit as their forefathers had done; and that they should not imitate the whites in mode of life, dress, or manner, but should live as their ancestors had done, roaming children of the river, forest, and plain. This doctrine was readily adopted by all the non-treaty or vagabond tribes, and is now their most cherished faith, as they hope that by adhering to it the whites may yet be expelled the country, and they occupy their own once more.

I visited the Falls of the Palouse on my way up, and found them well worth knowing, they being rendered unusually interesting by the eccentric rocks that surround them, and which assume the outlines of chimneys, domes, columns, broken pinnacles, sharp needles, and castellated ruins; while their banks, raised in retreating terraces one above another, attain a height of nearly 2,000 feet in some places. The falls are produced by the Palouse River nine miles from where it empties into the Snake, about forty-five miles from Wallula. This stream flows through three canyons with great velocity, but it is in its passage through the second that it forms the falls. Where these have their birth the chasm is 30 feet wide, and out of this they issue with an angry hiss and plunge downward a distance of 135 feet. Still working their way through deep and tortuous precipices, they make another small leap a few miles below. Salmon ascend as far as the main falls, and this causes the spot to be chosen by the Indians as a fishing-ground. Their numerous *wickiups* add much to the pictorial character of the scene, while the half-naked fishermen, with lances poised for a throw or bringing the struggling salmon from the water, form a most animated accessory. There are some charming falls in this region, but as they are never visited by tourists they are little known. One called the Spokane is about 100 feet high, and the Okanagane about 50; but as they have both width and depth they look much grander than their height would seem to indicate.

My next halting-place was at Lewiston, Idaho, a small town containing 700 inhabitants, and important as being the supply depôt for the mines and the grazing and farming country back of it. Its streets are generally frequented by throngs of miners, farmers, stock-raisers, soldiers, and painted Indians of the Nez Perce tribe, the latter being by far the handsomest and most intelligent of their race on the continent. They are frequently portly, and their features are rounded and regular. I was introduced to the leader of a band that has made itself a name for bravery since I last saw its members. This was Joseph, a lithe sinewy man, with a bright eye, a shrewd-looking face, and all the easy composure of the self-important chief. He kindly invited me to visit his band, and enjoy a hunt with him, and promised to make my stay as pleasant as possible, an invitation I subsequently accepted.

The country around Lewiston is hilly, sparsely clad with fir and pine-trees, but generously covered with nutritious grasses, which afford pabulum to large herds of horses and horned cattle and sheep. This town being the head of steam navigation on the Snake River, the boat hauled up at the wharf for the night. A few miles up, the river, although deep, is so turbulent, and its currents are so strong, that no steamers can ply on it. The Oregon Steam Navigation Company once tried to run a boat on it, but it took a fast steamer fourteen days to make eighty miles, and of that number it required thirteen days to make thirty-five miles, or an average of less than three miles a day; yet it came down in three hours. The river is only navigable to Lewiston from May to the middle of August, as the spring freshets then pour down from the mountains in torrents, and raise the streams 10 or 15 feet.

After spending a few days exploring the mines, farms, and visiting the scenery in the surrounding country, I returned down the river, as it would have cost much time and trouble to cross over the mountains into Eastern Idaho, which was my route to travel. The run down was made in a very short time, as the steamer averaged twenty-eight knots an hour, and could have done better than that if necessary. The difficulty of working up the Columbia and Snake Rivers may be imagined from the fact that it takes four days for a fast steamboat to run from Celilo to Lewiston, but makes the return trip in fourteen hours. The rapids over which it has to pass at intervals are so boisterous that it ships seas aboard, and often can barely struggle against their currents; and it is in such a constant state of trembling that one cannot write aboard, or even drink a cup of tea without having some of it spilled. None but the most experienced pilots are employed, and they know every rock and current in the channel of the rivers. On the way down the captain pointed out a spot called Elpawah, where a Mr. Spalding established the first Protestant Mission among the Indians west of the Rocky Mountains, in 1834. His wife and the wife of his co-labourer, Dr. Whitman, were the first two white women to cross the great Western chain, and to penetrate this wilderness. When the boat stopped at Wallula, I went ashore and engaged a carriage to take me to Walla-Walla, and there I booked as a passenger in the overland stage for Idaho.

CHAPTER XI.

THROUGH IDAHO BY STAGE.

The Umatilla Plains—March of black crickets—Over the Blue Mountains—The Grande Ronde Valley—The gold-mines and agricultural products of Baker County—Immigrants—In Idaho—Its area, population, physical geography, soil, climate, and productions, mountains, rivers, and lakes—A splendid game country—The Weiser, Payette, and Boise Valleys—Scarcity of settlements—Boise City—Over the plains—Malade Station—Unique cataracts and gloomy precipices—Rock Creek Station.

HAVING secured a seat on the stage beside the driver, and bade adieu to a group of friends from my perch, the Jehu gave his whip a short snap, the horses reared, gave a plunge or two, and darted off at a high rate of speed. For the first few miles out of town the scene was monotonous enough, as the route led through a level sage desert; but when we reached the high, rolling plains of the Umatilla in Oregon, it became exceedingly interesting. These plains have an altitude of 1,300 feet above the level of the sea, and are densely clad in summer with tall bunch grass and many species of gaudy flowers. Looking at them from an elevated position they seemed a vast meadow, and their luxuriant grass was made peculiarly conspicuous by the masses of yellow cowse which was omnipresent, the orange-coloured snapdragon, the white yarrow, the blue of lupines, larkspurs, bluebells, camass, and the pinkish hue of other botanical specimens which grew in the wildest luxuriance. Immense herds of spotted mustangs belonging to the Indians dotted the country for miles; deep bluish-green mountains and snowy pinnacles formed a striking background, and groups of red men, in their picturesque costumes, who were hunting ground squirrels, gave character to the foreground, and completed a splendid landscape view. The driver estimated that the tract of country under the immediate command of the eye embraced an area of 20,000 square miles, as we could see a distance of 100 miles in one direction and 200 in another.

When we reached the base of the Blue Mountains, we encountered large masses of black crickets, which were destroying every growing cereal and vegetable on their course, and leaving the country perfectly barren so far as the crops were concerned. These creatures are a regular plague some years in the region east of the Cascade Range; but a means has now been discovered of preventing them from injuring crops: this is to dig a shallow and narrow trench outside a field, and as it slopes and narrows from top to bottom the crickets cannot get out when once they are in, owing to their inability to crawl up a slope or to fly. In estimating the abundance of the insects, the natives say that they are forty or fifty bushels to the acre, and if the measure is anything less than this they consider them of little importance. These creatures cross streams by floating with the current, and being washed ashore wherever that touches the land or falls into smooth water. The Indians, I understand, eat large quantities by roasting them, and consider them a delicate *bonne bouche* even when better things can be obtained.

When we reached the base of the Blue Range the horses were changed, and six stalwart steeds were hitched to the coach, to pull it over the steep ascents that lead into Eastern Oregon.

In moving towards the summit we had a fine view of the extensive plains below, and grand they looked in their brilliant robes of grass and flowers. On reaching the top I noticed the unusual abundance of the larch, the wide-spreading maple, with its racemes of yellow flowers, the shrub-like common juniper, and the towering yellow pine (*P. ponderosa*), which often attained a height of 300 feet, and a diameter of 15 feet. The cornels or dogwoods were also quite common, and their white flowers did much to add brightness and cheerfulness to the sombre conifers. In passing through the mountain forest we caught glimpses occasionally of a timid deer, an inquisitive wolf, and coveys of the dusky or mountain grouse, which seemed to take no notice of the human foes firing at them with revolvers. There were no settlers in this forest, except the few keeping the stage stations, and their domiciles consisted of primitive log cabins, whose interstices were plastered with a reddish mud. It took the coach the whole day to cross the mountain, and in the evening it trundled into the little village of Union, situated in the midst of a round, basin-like plain, called the Grand Ronde Valley, which is noted alike for its picturesqueness, fertility of soil, and abundance of minerals. This section was dotted with farm-houses, which gleamed in the distance amid orchards or coppices of fir. Passing through this, the coach rumbled over stony mountain paths, and rattled over level valleys alternately, until it reached Baker City, the most important town in Eastern Oregon, although its population then (1875) did not exceed 1,000.

The richest gold-mines in the country are in its vicinity, their yield being estimated at 2,000,000 dollars per annum. There are some 100 mining camps in all, the larger number of which yield from 3 to 20 dollars per diem to the hand. Nearly all are placer diggings, yet quartz-mines are also worked, and some have proven exceedingly rich. The greater portion of this section is still unexploted, so that its wealth is unknown. The leading industry of its inhabitants is stock-raising, owing to the profusion of the *graminæ*, the mildness of the winter, and the facilities for a market afforded by the mines. The soil produces grains and roots of the best quality, the quantity of wheat raised from the acre being, in some instances, quoted as high as 90 bushels. Grapes, maize, melons, peaches, and other products requiring a sunny climate thrive admirably and yield abundantly. This valley, like all those in Eastern Oregon, is round, and environed by fir-clad mountains, and was evidently formerly a lake bed, as fresh-water fossils are scattered over it. Some parts are covered with wild sage, but the larger portion is clad with rye and bunch grass.

After leaving this town the country became more hilly and rugged, and artemisia and sunflowers were the chief botanical productions. We met several families moving into the region from the States east of the Rocky Mountains, and they presented a weary aspect after their long marches over hill and dale. Prairie schooners were very common, many of them being loaded with gold-bearing quartz rock, and others with hides, wool, or wheat and flour. After a tedious night journey the stage, much to our relief, ran smoothly over a sandy road for a distance of several miles, and by noon rolled aboard a small ferryboat on the Snake River, and on reaching the opposite side landed us on the soil of Idaho.

This Territory extends in an irregular outline from the 42nd to the 49th parallel, being bounded on the north by British Columbia, on the south by Utah and Nevada, on the east by Montana, Utah, and Wyoming, and on the west by Oregon and Washington Territory. It has an area of 86,294 square miles, a length from north to south of 485 miles, and a breadth varying from 50 miles in the north to 300 miles in the south. Its general surface is a high, rolling tableland, traversed in almost every direction by mountain chains ranging from 2,000 to 10,000 feet in altitude; yet it contains numerous small and depressed valleys, which are watered by a good-sized stream, or by the narrow outlets of the lakes which generally nestle in their bosom.

The plains average from 2,000 to 5,000 feet above the level of the sea; and while some of them are mere sage deserts, yet the majority are so profusely covered with the *gramineæ*, that they make splendid pasturages. Taking its total area of 55,228,160 acres, it is estimated that 16,295,600 acres are suited to agriculture, and 5,000,000 to grazing; 16,328,160 acres are sterile, producing only wild sage, purshia, linosyris, and kindred shrubs, but these are reclaimable by irrigation; 18,400,000 acres are mountains—of which 7,560,000 acres are covered with timber, 575,600 acres are occupied by lakes, and there are 8,000,000 acres of mineral land. Of its arable soil about 120,000 acres only are cultivated as farms; but extensive tracts are occupied as grazing ranges for horses, sheep, and horned cattle. The population of Idaho may be estimated at 25,000, of which nearly one-half is composed of Indians and Chinese.

The Territory is divided into nine counties, named Ada, Alturas, Boise, Idaho, Lemhi, Nez Perce, Oneida, Shoshone, and Owyhee, and each of these has a principal town having a population of from 200 to 1,500. The inhabitants are largely foreign, the greater portion of the latter being natives of Great Britain, British America, and Germany.

The Indian tribes include the Nez Perces, Bannocks, Shoshones, Kootenays, Cœur d'Alenes, Spokanes, and Pend d'Oreilles —of which the larger number is confined to reservations, where the children are educated and the adults taught to live by farming and stock-raising. These tribes occupy an immense area of the finest land in the country, but as they do not cultivate a fraction of it, the average yield per acre of the Territory in grains and roots cannot be stated positively. The small portion farmed by the whites gives handsome returns, wheat yielding from 20 to 90 bushels per acre, oats 50 to 100, and barley 40 to 90. Maize, sweet potatoes, and sorghum grow well, and the *pomona* also thrive admirably when irrigated.

The climate is hotter in summer and colder in winter than it is farther west, the thermometer running as high as 100° sometimes in summer, and as low as 14° in winter. Snow falls in considerable quantities on the higher valleys, and ice is formed from November to March. The general character of the climate resembles that of Central Illinois and Ohio, so that it is much more equable than the regions directly east of the Rocky Mountains, or even those within 300 miles of it, such as the States of Wisconsin and Minnesota.

The country is very wealthy in the precious minerals, its yield of gold and silver since 1863 having amounted to 80,000,000 dollars. Its annual yield now is estimated at 3,000,000 dollars, of which one-fifth is silver. The great quartz belt of the Territory is in the south-western part, in Idaho, Boise, Owyhee, and

Alturas Counties; and of that the Owyhee mines, which are principally silver, are the richest. Gold placer diggings are found in various places, but those that pay the best are scattered along the Boise Valley and the head waters of the Salmon and Clearwater Rivers. There are about 300 mining camps in the Territory, of which four-fifths are placer or gravel mines. A large portion being still unexplored, no person can tell the actual mineral wealth of the country, but the inference is that it must be very great, as coal, iron, copper, and quicksilver have been found in various places; and salt, soda, and sulphur springs are numerous. Some of these are thermal, and are largely frequented by invalids.

The principal valleys of the Territory adapted to agriculture are the Weiser, Payette, Boise, Clearwater, Salmon, St. Joseph, Brunneau, Wood River, and Bear River, and those along the shores of the Cœur d'Alene and Pend d'Oreille Lakes. A large number of Mormons is settled in the beautiful Bear River Valley, but they do not welcome gentiles in their midst. The northern portions, and some of the western, are heavily timbered, and possess extensive tracts of fertile land, but owing to the difficulty of reaching a market with agricultural products, no persons have settled there, except a few stock-raisers. The Territory is sadly in need of railway facilities, as the only railroads that now approach it are the Utah Northern, which touches Franklin in the south-eastern corner, and the Central Pacific, which passes near its eastern boundary at Kelton, Utah. A daily line of stage coaches keeps communication open between the railroad in the east and the Columbia River in the west, and to traverse that distance occupies seven days.

The Indian name Idaho is said to mean Gem of the Mountains, and in this case it is well applied, as the Territory is crossed in every direction by high chains. The principal of these are the Bitter Root Mountains, in the north-east, which are an extension of the Rocky Mountains. Near the borders of British Columbia, on the north, are the Kootenay Ranges, and south of these the Cœur d'Alene and Clearwater Mountains. At the headwaters of the Salmon River is a lofty chain, called after the stream; and farther up, on the Snake River, are the Weiser, Payette, Sawtooth, and Boise Mountains. The Owyhee Mountains are in the south-west, the Bear River Mountains in the south-east, and the Teton Range in the northern part, along the Wyoming border.

The Territory contains many lakes, which occupy charming situations amidst the mountain pinnacles or in small valleys. Some of them are as picturesque as any the mind could conceive, whilst others are grand in their extent, and are surrounded by majestic scenes. The two most important are Lake Cœur d'Alene, which has a length of twenty-four miles, and an average width of three miles, and Lake Pend d'Oreille, which is five miles wide, thirty miles long, and is navigable for steamers. Both are surrounded by dense forests of evergreens which give them a striking air of rugged wildness.

The rivers, as may be inferred from the number and altitude of the mountains, are quite numerous. Several of them average over 100 miles in length, and nearly all empty into the Snake River, as this drains the whole Territory, except a small tract in the north, 120 miles long, which is watered by Clarke's Fork of the Columbia, the Spokane and Kootenay Rivers, and a corner in the south-east which is traversed by the Bear River. The former—Clarke's Fork—drains Lake Kanisku in the north-western angle of the country—a splendid mountain tarn that has an area of 180 square miles, and is famous for its abundance of fish.

All these streams having a connection with the ocean teem with salmon during the running season, and with trout throughout the year; the lakes contain several species of fish; and the mountains abound in large game, such as bears, wolves, panthers, wild cats, moose, elk, mule-deer, mountain sheep, dusky grouse, geese, ducks, swans, and ptarmigans; whilst hares, foxes, badgers, antelopes, prairie wolves, and the sharp-tailed grouse frequent the plains. The scarcity of population makes it a splendid hunting and fishing region; and no one, no matter how poor a shot he may be, need fear returning from a hunt without a trophy of the chase. The best hunting district in the Territory is Idaho County, as it is very mountainous, well wooded, and extends east and west from Oregon to Montana, so that it is frequented by all large animals indigenous to that region. Some of the best trapping on the continent may be obtained there, as the otter, beaver, musk rat, fisher, and mink are common.

The finest valleys in the Territory are in the west, and their deep emerald hue affords a pleasant relief to the eye after gazing for hours at artemisia and sunflowers. The first one over which the stage passed was the Weiser Valley, which was watered by a handsome stream of the same name. Farm-houses appeared there, and thousands of cattle roamed over the luxuriant grass in the most wayward manner, for it was devoid of walls and fences, except the few garden patches that were environed by a matting of willow wands. No trees were to be seen except the poplars, willows, and alders that margined rivulets, and this caused the country to look quite bare. It has been found by experiments made that the Territory can support large coppices of walnut, larch, pine, fir, and other trees, if they are irrigated; and apple, pear, peach, and cherry-trees need but little attention to flourish profusely. Few orchards were seen on the road, however, as many of the settlers were not in the country long enough to be able to boast such an addition to the comfort of their homes. Most of the houses were primitive in character, being composed of logs, yet not a few looked like cottages, and presented a civilized appearance in their coat of white. The route the entire day led over alternate vegetable deserts of sage, on which nothing seemed to thrive but a few snow-birds, chipping sparrows, large coveys of sage cock, and thousands of the sage hare, and over charming vales robed in a delightful garb of rich grass.

The most important of the valleys were the Payette and Boise; but advantageous as they appeared to be for farming and grazing, the settlers upon them were few and far between. The variety in the landscape, in conjunction with the snowy peaks of the Owyhee or War Eagle Mountains, and the millions of swallows that flitted along the streams, kept the attention from becoming wearied, until night closed the scene, and sent the passengers bobbing their heads for sleep, or falling over one another in fits of unconsciousness. One of the most tedious journeys that can be made is that in a stage-coach, if one is compelled to be a cramped denizen of its hard seats for several days and nights at a time.

The roads or trails out there are not equal to the streets of a city in smoothness, and every jolt in the cumbrous vehicle, or every pitch into a rut, hurls the sleepy passenger from side to side, or sends him bounding towards the ceiling, and when he returns to his seat it is with an involuntary grunt of torture. If not overcome by weariness, however, a run by stage over some of the plains is delightful, owing to the novelty and expansive character of the scenery, the animating influence of the bracing mountain air, and the sensation of travelling through a country almost as primeval as it was thousands of years ago. I was glad when at three o'clock in the morning the coach began crunching the sandy streets of Boise City, and still more so when I secured a good bed at the Overland Hotel and retired to rest for the first time in ninety-six hours. The delights of that sleep exceeded any I had ever known, so when I awoke in the morning I felt as refreshed as if I had never become acquainted with the tortures of a bounding stage and bad roads, or the inconvenience of bumping a fellow-passenger in the eye, mouth, or nose with my head, or driving my elbow into his ribs with a vigour that elicits a deep groan of pain.

The city in which I enjoyed my delicious repose is the capital of the Territory, and the most important town in it, being the supply depôt for a large area of mining country. It has a population of about 1,500, and, for a mining community, the citizens are models of quietude and good order. During the day of my arrival the streets were well filled with the prairie schooners, yet I saw only one man under the influence of liquor.

The first thing to attract a person's attention in the place is the large number of windmills in motion, and the streams of red muddy water that course down the gutter-ways. One would think at first that they were used for mining operations, but a little investigation proves that they are employed in irrigating the flower and vegetable gardens that surround every house. I visited one of these gardens, and found it producing all the ordinary roots, fruits, and vegetables, maize, sorghum, and sweet potatoes, besides masses of brilliant wild flowers which had been brought under cultivation. The proprietor of this establishment informed me that nearly all the products of the temperate zone could be raised in the country by means of irrigation, and that there would be little danger of losing crops by storms, owing to the absence of much rain in the summer and autumn, the long sunny days which prevail, and the absence of pernicious insects, except the occasional visits of black crickets, and they, he thought, were easily suppressed. He deemed the climate of the region to be actually delightful for eight months in the year, and to be better than that of the Atlantic States for the other four, as the fall of rain was light, snow never stopped travel, and ice was not formed to any extent before the middle of December. The days in winter, even when cold, were bright and sunny, and were less piercing than those regions where heavy chilling fogs penetrate to the bone, and cause one's blood to curdle up into an almost stagnant rivulet. He thought the climate bracing, inclined to produce activity, and seldom so severe as to inflict much suffering, even on those who labour outdoors. The mines are worked both summer and winter, so that his statements would seem to be verified by easily ascertained facts.

The absence of all trees in the streets, except the species of poplar called cotton-wood, gives the city a rather bare aspect, and this effect is heightened by the extensive woodless plains that stretch in an almost unbroken line to the snowy pinnacles of the Owyhee Range far in the south-west.

The place has a much greater importance than its small population would indicate, owing to its being the official residence of the Governor and the territorial officers, the site of the public buildings, which include an assay office, and a garrison post of the army. It is also the diverging-point leading to Idaho City, Silver City, and other principal towns in the mining districts, and being on the overland route, all traffic, goods, and passengers must pass through it. It has several churches, some good schools, and, of course, a newspaper. It is, in a phrase, an enterprising place, and a good representative of the go-ahead Western town.

I left this city in the stage, and was once more rolling over splendid grazing ranges; but I saw few horses or cattle. I noted immense droves of hogs in spots called camass prairies, and some of these looked as lean and fierce as wild boars, though the majority seemed sleek and fat. They receive no other food than the roots they dig up in these prairies for three months, yet they return in such excellent condition that they are fit to be sent to market. Their favourite food is the camass (*Camassia esculenta*), a wild parsnip, and a small white and starchy root called *cowse* by the Indians; and as these grow in the greatest profusion over an area of several square miles, the animals could thrive upon them the year around, as they retain their nutritive qualities for several months.

Small birds, such as blackbirds, larks, snow-birds, yellow-birds, song sparrows, and robins, were unusually numerous on these plains; and such flowers as lupines, larkspurs, lilies, a species of dianthus, buttercups, pansies, yellow violets and bluebells, and kindred flowers carpeted the ground as far as the eye could see. The route sometimes led amidst terraces of trap, then among rounded hills and sloping prairies, where granite rocks prevailed to such an extent that they reared themselves into huge boulders above the ground. I saw no house for a distance of twenty-four miles, except three small cottages that skirted a stream, and they were evidently occupied by horse-dealers, as thousands of mustangs of many hues grazed in the pasturages surrounding them.

The stage stopped at Rattlesnake Station to enable passengers to get dinner, and I employed this interval to visit some hot springs close by, as I could not eat the half-cooked pork and watery potatoes which formed the "stage dinner," and for which the sum of 1 dollar was charged. The greatest annoyance one meets on this route is the station-houses where meals are served, as it is almost impossible to get a decent repast at one of them. The usual meal is fat ham and eggs, or boiled pork, potatoes, and bread that looks as if it were baked in black ashes, while the coffee is the very vilest stuff. One place at which I stopped did not furnish any fresh meat, although hundreds of cattle were grouped around the house; and no milk, although several cows with calves were within twenty yards. The fact is that they never again expect to see the passengers, so they give them as little as they can and charge as much as possible.

The route over these vales and hills revealed little human life, and were it not for the occasional parties of mounted Indians we met, we might have imagined ourselves in an unexplored land. We could easily tell the red men as far as we could see them by the peculiar habit they have of keeping the legs, from the knees downward, constantly in motion when on horseback. The best way to tell the white from the red man on the plains, when mounted, is to note the movements of the legs, which the latter ply back and forth or in and out, whereas the former rides as steadily as a centaur.

In passing through stretches of sage the driver pointed out several rabbit warrens, as he called them, in which several thousand sage hares are said to dwell in security, owing to the absence of foxes and prairie wolves, and the cover afforded them by the dense shrubbery from the attacks of owls and hawks. Rattlesnakes were exceedingly common on the plateaus where trap rocks prevailed, and I killed several that were out sunning themselves with large stones. These unpleasant creatures are kept away from the vicinity of farm-houses by the hogs, for the latter are deadly enemies of the *crotalus*, and attack it viciously whenever they get the opportunity. They generally receive first the attack of the snake in the fleshy part of the neck, and before a second can be made they snap off its head and shake the body as a terrier would a rat. They seldom, if ever, suffer from the poison, owing, I should infer, to its absorption by the fat, or perhaps to some antidote that the porkers may know.

The first interesting point at which the stage stopped was Malade Station, where 20 or 30 streamlets issued from the earth and bounded down a distance of several feet in sheets of foamy spray, and uniting below formed a deep and rapid river called the Malade. These springs, known as the Lost River, on account of their sinking suddenly into the earth where porous trap prevails, disappear from the surface very frequently, and reissue miles away in a series of falls which leap down into broad caverns or gloomy chasms so dark and forbidding that one would imagine they were the models from which Homer drew his pictures of the plutonic regions. When I visited the place a large camp of Indians was stationed near it, and their numerous fires at night, and their dusky forms which flitted noiselessly about, did much to aid the imagination in considering the scene strangely unearthly. Near this place is a beautiful cataract called Sand Spring, which is 130 feet high, and is well worth visiting.

Still onward by stage over a sage plain, a ride of eleven hours placed me at Rock Creek Station, 140 miles from Boise, and there I gladly halted to pay a visit to the Shoshone Falls (pronounced Sho-sho-nee), one of the most magnificent cataracts in North-western America, and a Mecca for all tourists passing through Idaho. I obtained the first glimpse of the Snake River there, and boisterous it seemed as it dashed through precipices 500 feet deep, or bounded over rocky obstacles in masses of foam. This stream and its tributaries boast all the cataracts in the Territory, though only three possess good pictorial effects. These are the Pah-chuk-lak-a or Shoshone Falls, whose name in the Indian tongue means "Gift of the Great Spirit," the American Falls, 60 feet high and 200 yards wide, and the Salmon Falls, about 30 feet high and 100 yards wide.

As I was the sole visitor to the Shoshone Falls the morning of my arrival, I was fortunate enough to secure the only spare bed in the log cabin that formed the station, and being assured that it would be kept for me I made arrangements for visiting the falls and the wild scenes adjacent to them.

CHAPTER XII.

THE SHOSHONE FALLS AND CITY OF ROCKS.

A visit to these places—The grandeur of the former, and the strange characteristics of the latter—An unexpected meeting in an unexpected place—A search for a buried treasure.

HAVING been furnished with a letter of introduction to the division agent of the stage company, he was kind enough to furnish me a yellow mustang that was said to be an adept at "bucking," and to refer me to a man in a mining hamlet, some eight miles distant, who he thought would readily act as guide. By jumping on the mustang's back before he guessed what I was about, laying a heavy stick over his flanks in a vigorous manner, and yelling like a Sioux brave on the war-path, I terrified him into a gallop before he knew what to do; but that he was unused to such a gait was made evident by the many attempts he made to halt, and his heartbroken grunting; yet I gave him no opportunity to lag or change his mind, so reached the canyon of the Snake River in an hour's ride. The landscape the entire way was as desolate as one could imagine, for naught met the eye but a wearily level sage-clad plain, which extended to the snowy mountains far in the hazy distance.

Arrived at the river, I tied my *cayuse* in a deserted and roofless miner's hut, and descended the deep precipice by a tortuous dizzy path that led to Springtown, a hamlet composed of a few miserable Chinese huts, that lies buried at the base of the canyon 500 feet below. Here I found two merchants who traded with the Celestial miners. Their residences differed from the others in having a canvas roof, and a few boards placed outside the mud-cemented stones that formed their dwellings and warehouses. Two enormous dogs announced my presence by loud barking and rather disagreeable grimaces; but ere they concluded to fasten their fangs in my flesh, their owner came out, and greeting me cordially, though a stranger, booted the animals to their kennel under his own bed.

After stating the purpose of my visit, one of the merchants volunteered to lead me to my destination, and in less than ten minutes had his mustang saddled, and was leading him up the dangerous trail that led to the upper world. Once above, we dashed over the plains at the best speed of our horses—now striking to the left to avoid becoming entangled in herds of half-wild mustangs, then to the right to flank masses of broken trap, which were scattered over the ground in as much confusion as if they had only been thrown out of the fiery furnace a few months previously.

After a gallop of three miles, my guide promised to show me the prettiest falls in the world, though, according to his assertion, no tourist ever visited them, and they were never referred to in any descriptions of the country. Turning sharp to the right we struck an Indian trail, which wound round and down bluff after bluff, until it reached what is known as the Park, on the banks of the river. Opposite this, in the middle of the stream, is a small island covered with a few stunted junipers and masses of sunflowers, and on both sides of it the river plunges downward an estimated distance of 108 feet. By crawling over a shelf of loose stones, and lying flat on the abdomen, I was enabled to obtain a fine view of these really picturesque falls. On the farther side the water flowed in a broad white sheet, but on the near side it swelled into a convex mass, owing to the sudden contraction of its course by jutting shelves of rock. Both displayed splendid rainbows that spanned the width of the river. As my perch was a precarious one, owing to the loose stones of which it was composed, my volunteer guide held me by the feet, and when my head was becoming dizzy from gazing at the struggling waters below, kindly dragged me to *terra firma*, much to the detriment of my riding outfit. Asking him for the name of such charming falls, he said they had half a dozen names, and were known equally as the "Little Shoshone Falls," "Chinaman's Falls," and "Engineer's Falls." Finding they had no regular cognomen, I undertook the work of baptism also, and, with his aid as sponsor, denominated them "Island Falls." We left the Park by another trail that led us among deep gloomy cavities, formed by the river in the misty past, long ere it had contracted to its present limits. These were frequented by thousands of cliff swallows and some sparrow-hawks that chattered and screamed incessantly; and from an occasional bunch of straggling shrubbery came the pleasant notes of the song-sparrow. These broke the monotonous silence of the forbidding precipices, and gave life to the otherwise dreary scene.

Having reached the upper plateau once more, we galloped two miles farther, and halted to listen to the rough, hoarse, and muffled roar of the Shoshone Falls, that were thundering far beneath us in the canyon. Half a mile beyond we had a fine view of their outlines. Looking down from our elevated terrace, we could see around them all the elements of a beautiful landscape—gorse and meadow, plain and dell; an undulating park, rich in robes of many-hued flowers; a placid river, and a boiling, snowy cascade; and, in the background, towering terraces of barren crags—veritable mountains of stone. Dismounting, we led our horses down bluff after bluff, until we reached a small park skirting the river. This was covered with grass that reached to our knees, and sprinkled over it were many species of gaudy flowers new to me.

We followed the bank of the river until we reached a coppice of juniper and cedar that thrives wherever the refreshing spray falls, and, passing through this, found ourselves standing on Lookout Point, directly over the river where it plunges downwards; and from this spot we had a magnificent view of the falls, as we could gaze directly down upon them, they being only four feet below us. Glancing up the stream, we could see that its sinuous course for half a mile was one mass of screaming rapids and small cataracts, which were numerously dotted with barren crags and flower-clad islets of many forms. By counting the larger leaps, we made out eight good falls within an area of 200 yards, which averaged from 6 to 20 feet in height, and no two were alike in outline. Close to the shore the water formed deep lanes or canals of bubbling cascades through the rocks, and their gentleness contrasted strongly with the turbulence adjoining them. As these varied and diverging bodies approached the precipice they swung together to produce the grand falls, which are excelled only by Niagara and the falls of the Missouri in volume, while they outrank all in diversity of form and contrast of surroundings. Massive in power and vigorous in action; warm in colour, yet environed by gloom; picturesque in immediate accessories, yet encompassed by savage grandeur, they possess all the elements that make such scenes attractive to the lover of the beautiful. Their very situation, in the midst of a desolate artemisian plain, and hemmed in by canyons whose dreary depths are impenetrable to the sunlight for many months in the year, only adds to their interest and enhances their impressive magnificence. The main falls are estimated by those dwelling in their vicinity to be 220 feet in height; but this is probably beyond the bounds, though, judging from appearance, not much. They have a width of 300 yards by following the curve of their outline, but in a straight line they will not much exceed 200 feet. They are of an irregular concave shape, somewhat like a reversed crescent; but during the spring freshets they assume a convex form, owing to the increased volume and velocity of the water. The pretty park, with its luxuriant grasses, flowers, and coppices of junipers, gives a softness and colour to the falls that are agreeably appreciated by the eye, as they impart the gentle element so much needed; but on the opposite side the dark and towering terraces of trap, with the inevitable accompaniment of a heavy talus, loom up against the sky in black masses, and convey the most impressive idea of gloom and rugged wildness. While the falls are grand from every point of view, it is only at their base that one can fully appreciate them, and I found the attempt to reach that position a most hazardous one, as I had to descend the sheer face of the boulders, and in several instances I could only find a light hold for my finger-tips and the toes of one foot. Had a bit of the rock given way I must have been dashed to pieces on the crags below. It was only by bracing every nerve and firmly clenching the teeth that I was enabled to make the descent; but I confess that even then a knee occasionally trembled, despite my utmost effort to be brave. After a toilsome struggle I reached a prostrate tree, that lay against the bluff at a convenient angle, and this led me into a ravine, which was covered with stunted junipers, cedars, briers, and a large wiry grass. This even was so steep that it was only by leaning well back and falling against trees that I was prevented from being shot downward into the river by my own momentum. By clambering over boulders, vaulting fallen trees, and making bridges of water-polished trunks, I was enabled to get within 40 feet of the falls; but further progress was checked by the smooth and perpendicular crags.

Selecting a mossy bank covered with a long, dank, and prostrate grass, I threw myself upon it, and for two hours gazed upon the stirring scene before me in a sort of half-dreamy mood, for it was too overpowering to allow the faculties to expand into full action. The longer I looked the more I desired to, for I was fairly captivated by the grand yet weird beauty that surrounded me. The water, in overleaping, sweeping waves of white, and with a vibrating sound that resembled that produced by many mills in motion, thundered steadily downward, and developed splendid rainbows, that extended far above the falls and spanned the stream, while heavy showers of vapoury spray rose slowly upward to a height of 300 feet, then lazily floated away in clouds of darkish grey. The Snake River boasts of several other smaller cataracts, the most important being those mentioned; but a few of its tributaries display the most unusual varieties to be found, perhaps, in the world. Some of these plunge down into the earth a distance of 200 feet, through irregular rocky cavities, and, continuing their way underground for several miles, come again to the surface in the form of a boisterous river, only to renew the leap. The most important of these are Lost Falls, some thirty or forty miles from Shoshone Falls. I can only speak of one from personal observation, having passed the others before I was made aware of their character, but from what I could hear they display some extraordinary features. Having gazed on the cataract until nearly dusk, the guide, who had been looking after some mustangs, returned, and we rode off to his plutonian camp, where I spent the night, the larger portion of which was passed in listening to the tales of pioneer life, Indian warfare, and the varied life the two merchants had led for twenty years. I left early the next morning, after kindly thanking my hosts, and resumed my eastward journey. I made the first halt at City of Rocks Station, and tarried there overnight.

The next morning I partook of an early breakfast, and slinging a Henry rifle over my shoulder, to meet any unexpected contingencies, I set out to visit the rock-built city, whence the station takes its name, some three miles distant. The road to it was deeply worn, as it had been used for many years by the overland emigrants to California and Oregon long ere the iron steed dashed westward to the Pacific. A walk of a mile brought me to the Sentinel Rocks—two huge masses of granite which guard the vale in which the city reposes. They tower upward to an altitude of perhaps 250 feet, and are about 20 feet apart. They form the only opening in the mountain of which they are a portion; so it would seem as if they were created as a special gateway to these wilds. From base to summit they are covered with the names of pioneers, their place of residence, and the date of their arrival at that locality. These autobiographies are printed with black axle-grease, and the writers being amateurs at the printing art, their work resembles hieroglyphics at a distance. The names of many a Smith and Brown are stamped so indelibly on this rocky parchment that nothing but its disintegration by the action of weather and time can erase them. Walls of granite extend westward for a distance of several miles from these towers, but to the east they merge into rounded hills, which are clad with the Western juniper. These low, shrubby trees were the first I met in that section of country, and they formed a most pleasing adjunct to the landscape, as they relieved it of its dull barrenness. Passing through the gateway made by the Sentinels, I found myself on the brink of the valley containing the city. This seemed to have an area of about eight square miles, and was, apparently, formed by erosion, as semicircular ranges of hills environed it on the east, and huge masses of feldspathic granite, so broken as to present a ragged outline, bound it on the west. The crags contained the nests of a large number of sparrow-hawks, and the incessant screaming and flitting of these birds was the only sign of life to disturb the droning solitude that reigned all round. Groves of the arboreal mountain mahogany occupied the base of the hills, but high above it the dark green juniper held sway. The former grows in clumps, seldom averaging over 40 feet in height, and perhaps 6 inches in diameter. It is known as ironwood to the mountaineers, owing to its density and hardness, and they use it extensively for making canes, the only purpose for which it seems adapted, as it is too small to be available for lumber. It presents a very pleasing appearance when in foliage, as it has spreading branches which give it the port of an apple-tree at a distance. Below these groves the artemisia appeared and covered the ground as far as the eye could see.

A walk of two miles brought me to the suburbs of the city, which are composed of several granitoid boulders, the largest and most conspicuous being known as Register Rock, from the great number of names that it contains. This is one of the largest isolated rocks in the region, and by far the most interesting. It has a circumference of perhaps 300 yards, an altitude of about 150 feet, and is one mass of names, as every one passing it seemed to be anxious to hand his name down to posterity; for even the crevices, where it seems almost impossible persons could penetrate without ladders, wear a coating of black cognomens, so that the whole looks like the first impression from a printing press. Almost all nations and people are represented on this lithological tome; but New York and Missouri have precedence, their sons having the largest representation. The dates commence with 1849 and extend down to 1870, but none appear later than that year. Some of the Argonauts specified that they were going for gold to the strange land in the distant west, but that they would return when they had collected a store.

As the tourist gazes on this silent record, how vividly it portrays to him the character of those who made it! What courage, endurance, and bold adventure it represents, and even what sorrow—for many of those who blithely inscribed their names on this weather-beaten tower had left all they held dear in life behind, and many, alas! never returned, as the lowly roadside graves too readily attest. By attempting to recall the shadowy form of those who passed that way to the foreground of memory, what clouds of various faces appear, and yet how homogeneous they are in thought, for gold! gold! is the aspiration of all! One inclined to reverie could remain at this silent monument all day long, and find matter upon which to muse.

Leaving this place, I moved a few yards in front, and came suddenly upon the city. It did not at first seem to present a very striking resemblance to a city, but on a longer examination its characteristics began to develop, and I became interested in noting its quaintly picturesque aspect. It is composed of masses of disintegrated granite worked into all varieties of forms by the action of water, weather, and time; and he whose imagination is vivid can behold in these, both blended and isolated boulders, the towers, minarets, domes, and castellated ruins of a mediæval city. Occupying a niche in the hill, the streams which formed the valley in, probably, the glacial period, have worn irregular pathways, bearing a strong likeness to grass-grown streets, through the rocks, and these add much to the appearance of the place. Add to these a thin line of foliaceous shrubbery which fringes a small stream that bubbles through the centre, and the picture of the city is complete. Picturesque it certainly is at a distance, but on closer inspection the resemblance to a town ceases, and one only beholds masses of granite worked into eccentric forms without, apparently, any purpose.

I passed through every street, but I could not find many names on the rocks; so the pioneers evidently merely gazed at the place from a distance. While rambling through it I startled a large herd of antelopes, but as I was not expecting to meet any life in such a locality, they were lost among the crags ere I could get a shot at them. I learned subsequently that these animals use the place for a summer dwelling in which to rear their young, as it affords them a safe retreat from the wolves, which constantly harass them in more exposed situations. The vegetation is also tender, owing to the stream percolating through it, and there is besides an abundance of water—a most important blessing in that region, where rivulets are so very rare in summer that animals have to travel many miles to allay their thirst.

Moving to the top of the granitoid hill back of the city, I had a fine view of the panorama spread out below, and, as the sun was setting, it was illumined by his beams so vividly as to bring out every object in a strong light. The rays glinting the summit of the crags, or straggling through the numerous crevices, gave the place a naturalness not previously displayed, as it then resembled somewhat the old architectural structures of Switzerland and Italy, with their unexpected angles, towers, and gables, but they seemed to be hurled together in the most inextricable confusion.

Wearied with my day's rambling, I was returning to my hostelry in quite a listless manner, when I was startled suddenly by the appearance of three men, who were digging at the base of a crag. I certainly did not expect to meet any of the human family in this wild and lonely retreat, so I was somewhat taken aback at the apparition. I looked around for their camp, but could see nothing resembling it except a roll of blankets a little distance from them, on which three revolvers, ready for prompt use, and three bowie-knives in their scabbards, were laid. Their work and accessories looked so very suspicious that I climbed, though with much difficulty, to the summit of a huge crag which overlooked their position, laid my rifle on a line with their heads, and was then prepared to await developments. My supposition was that they were robbers engaged either in digging for or preparing to bury some treasure; and this was heightened by their costume, and the fact that all wore heavy Mexican spurs, although I could see no horses. I waited and watched for half an hour, but seeing them as busy as ever, I concluded that they were, perhaps, miners engaged in prospecting; so I descended from my tower and approached them cautiously, with rifle ready for instant use, and keeping between them and their weapons. I was within ten yards of them ere I was detected, but that was no sooner done than the three jumped out of the hole they had dug almost simultaneously, and made a rush for their pack. I gave them a peremptory command to halt, or I would let fly at the first man that moved.

This led to a parley, which ended in a friendly conversation and a shake of the hand. From them I learned that their suspicious action was nothing more than an effort to find a treasure supposed to have been buried somewhere in the vicinity about two years previously by a party of highwaymen who had robbed the Montana stage, which contained the mails, and Wells, Fargo and Co.'s express box, said to have been heavily laden with several thousand dollars in gold dust. Both the highwaymen were subsequently caught, and sent to the penitentiary in California, and while there one of them, who did not expect to live, gave directions as to the place in which the treasure was buried.

A company of San Francisco capitalists had tried for two years in succession to find it, but they having relinquished it, the present party had undertaken the search, and had been at it then about two months. They had tried divining-rods, throwing stones and digging where they fell, and, as a last resource, had consulted a medium or *clairvoyant*, and they were then plying pick and shovel where she had recommended them. It is needless to add that they were unsuccessful, so the treasure remains undiscovered to this day, though many have sought it. This incident completed the picture of the city, for it was the only thing lacking to give it the air of wild romance which so readily accorded with the lonely enclosing landscape. Thanking the men for their tale, I bade them a good evening and went on to the station.

A visit to the City of Rocks will repay any tourist passing through or near Idaho, but as the place lacks grandeur or beauty of surroundings, it will never become a Mecca for the æsthetic lovers of nature. It has an air of solitude which becomes oppressive after a short time, and having no pleasing accessories of gorse or dell, luxuriant verdure or brilliant flowers, having nothing, in fact, but the eccentric masses of cold, grey, dull granite and whitish-green clumps of artemisia, it is devoid of colour, so the impression it leaves on the senses is that of a dismantled rock-built city of the stone age, which has become the home of the wolf and fox and the ghostly owl.

Having spent two days hunting in this section, and found nothing better than sage hares, sage cocks, and a few lizards, I turned my face eastward, and in an hour after leaving the station entered the Idaho desert, which extends as far as the boundary-line of Utah, fifty miles distant. Nothing grew on this but the most useless shrubs, and neither cattle, houses, nor human beings were seen, except those belonging to the stage stations, and they were fifteen miles apart. No trees greeted the vision, except an occasional bunch of junipers, and a sickly mountain mahogany that was torn by every breeze that swept the plain. Barren as this region looks, it is no worse than some places in Utah which Mormon patience and industry have made into fertile gardens by means of irrigation.

After a ride of thirteen hours I reached Kelton, in Utah, and was pleased to find myself on a line of railway once more, and within rapid means of communication with the outer world.

CHAPTER XIII.

THE RESOURCES AND WONDERS OF MONTANA.

The American desert—A gentile settlement—A trip in a prairie schooner—Character of the captains of the plains—Virginia City—Area, divisions, population, mineral wealth, crops, and topographical conformation of Montana—The principal agricultural regions—Its mountains, lakes, and rivers—Gates of the Rocky Mountains—Wild scenery of the Missouri River—Game and fish of the country—The principal towns—Fast life in Helena—Scenery of the country—Schools and libraries of the Territory.

KELTON being notorious for its bad hotels, high prices, and uninteresting situation, I left it at the earliest opportunity, and was content with a seat in the caboose of a cattle train rather than wait there until the passenger train arrived. Moving out of the town, the long line of cars was soon winding over the great American desert, a region so barren that it yields nothing of greater utility than a coarse grass, and stunted artemisia and kindred shrubs, while its soil is so strongly alkaline in some places that it does not produce even the most useless plant. Being a portion of the Great Salt Lake Basin, it is supposed to have been formerly a fragment of the inland sea that extended westward to the Sierra Nevada Mountains, but that when the sea had evaporated, or was drained off through rivers communicating with the Pacific Ocean, its level contour caused it to retain large quantities of salt and other minerals, and it was thus rendered unproductive. After a tediously slow journey the train reached Corinne, the only gentile settlement in Utah, and therefore a perfect Babylon of wickedness in the eyes of Mormons. This place was formerly unusually prosperous and enterprising, as it was the head-quarters for the numerous prairie schooners that transported goods into Montana; but since the construction of the Utah Northern Railroad it has lost its commerce and *prestige*, and is now only a sleepy village of 700 inhabitants. I left there for a small town called Franklin, in Idaho, 100 miles distant, *vid* railroad, which is now the head-quarters for the hundreds of large waggons or prairie schooners that take manufactured articles into Montana, and return laden with the products of that extensive region. From Franklin all travel northward is by stage or horseback, and he who chooses the latter may rely upon jolting enough to dispel all symptoms of indigestion, as the country to be traversed is very hilly, and the roads are mere trails. I secured a seat in one of the "schooners," as I wished to see the sort of life led by those captains of the plains who drive the mules, and I thoroughly enjoyed the novelty of the trip. The genial fellow with whom I booked as a free passenger led a line of perhaps thirty waggons, and by this leading advantage escaped the clouds of dust which enveloped those in the rear. His team consisted of eight pairs of mules and two "bell mares," whose jingling cadence soothed the feelings of the obstinate long-eared quadrupeds so much that they toiled and struggled all day without an effort at a display of stubbornness. Our route led back through Idaho, and carried us through the fertile valley of the Beaver River, where Mormons were quite thickly settled. Their substantial houses, well-kept farms, and crowds of tow-headed children were seen in every direction, and gave the country a cultivated appearance most pleasing to behold.

The long line of waggons rumbled onward all day, and in the evening encamped together in an open plain. Fires were then lighted, and a supper, consisting of fat bacon, bread made out of self-raising flour and baked in a pan, and hot strong coffee was partaken of by the drivers with a relish which can be enjoyed only by those who toil hard and have their appetites sharpened by the bracing air of the plains. After this was over the teamsters paid each other friendly visits, but I noticed that the inquiries made were usually about the draught animals, and their good conduct during the day. If the answers were not satisfactory on the latter point, a dozen recipes would be given for bettering it, and some would go so far as to advise the death of that "Yaller Jim," "Black Bill," or "Wall-eyed Virginia," as nothing else could cure them of their ill temper. The last spree in Franklin, Bozeman, or Helena was related with the most minute exactness, and the fight that Piegan Jack had with Hiel Southard discussed in all its bearings, and the cause of the death of the latter analysed in the most tediously detailed manner.

When the time for retiring came each muleteer spread a roll of blankets under his waggon, rolled himself up in it, and was soon fast asleep. At daybreak the next morning the animals were fed, a repast of the same character as the previous dinner eaten, and the long line resumed its march. These teamsters are a hardy, rough-and-ready class, who seem impervious alike to fear and the vicissitudes of the weather; and it would be difficult to find any persons more hospitable than they are. Their mode of life prevents them from enjoying many of the advantages of education, yet few are met who cannot read and write; and all can discuss local and national politics with a terseness and emphasis that would do credit to a professional politician.

The individual among them who is not brave, or, as they term it, "has no sand in him," is rare indeed, as the majority of them have had to fight Indians many a day, and being adepts with the rifle and revolver, the body of men that could defeat them is difficult to find. Every one carries arms in his waggon, and not a few wear revolvers in their belts, so that they are prepared for emergencies at all times. Many drive their own teams, but several are employed by transport companies at sums varying from 100 to 200 dollars per month, according to the dangerous character of the route they traverse, or the heavy work they have to do. Whenever a body of Indians takes to the war path the caravanseries are the first objects of assault, if plunder is desired, but the occasion is very rare when the attack is successful, if the teamsters are in any numbers, or have received an intimation of their danger.

I stayed with the caravan until it reached Fort Hall, in Idaho, and there bidding my kind host a farewell, I booked as a passenger in the stage that ran through Montana, then distant some 200 miles. The route over which it travelled was but sparsely settled, and wandering Indians even were seldom seen.

I made my first halt at Virginia City, the former capital of Montana, a town possessing about 1,000 inhabitants; but it was then rather dull, owing to the fact that Helena had been made the capital, and that some of the mines in its immediate vicinity were decreasing in value. The country traversed was exceedingly mountainous, and as the stage had to move slowly, the trip as far as this town was somewhat tedious, although the scenery was interesting, and we met several lines of waggons moving out, whose presence dispelled our feelings of loneliness. As this place is one of the most important points in the country, it may be well to note here the general character of the Territory, and its agricultural and industrial resources.

Montana, which lies between 44° 15′ and 49° north latitude, and 104° and 116° west longitude, has a length from east to west on its northern border of 540 miles, and along the 45th parallel of 460 miles; it has a width of 275 miles, and a total area of 145,776 square miles, or 93,296,640 acres. It is divided into eleven counties, namely, Beaver Head, Big Horn, Choteau, Dawson, Deer Lodge, Gallatin, Jefferson, Lewis and Clarke, Madison, Meagher, and Missoula. It has an estimated population of 25,000 whites, nearly 3,000 Chinese, and 500 coloured persons, exclusive of 20,000 Indians, who are principally confined to reservations. Of its white inhabitants less than one-eighth is engaged in agricultural pursuits, one-ninth in personal and professional services, and one-twentieth in trade and transportation, the remainder being occupied in mining and manufacturing, so that the greater portion of the country is still unoccupied.

The Indian tribes of the Territory are the Flatheads, Blackfeet, Bloods, Pend d'Oreilles, Kootenays, Mountain and River Crows, Piegans, Gros Ventres, and several distinct tribes of the Sioux. All these have reservations set apart for them by the Government, but the Bloods and Blackfeet seldom visit theirs, being constantly engaged in hunting in British America. These tribes are not very dangerous, except at intervals, when they make raids on isolated settlements for a few days or weeks in search of plunder and scalps; but these are now becoming much less frequent, owing to the number of troops in the country.

The general character of Montana is, as its name indicates, rugged and mountainous, especially in the western portion, where it may be said to be one series of chains, separated by deep, fertile valleys and sloping terraces. The north-western part, near the Idaho border, which embraces nearly one-fifth of the country, is unusually rugged, and south and south-west of this are several large basins walled in by groups of mountain ranges. The eastern division, which is separated from the other by the Rocky Mountains, consists principally of rolling tablelands, which are well watered by numerous streams, and used as a pasturage by immense herds of buffaloes, antelopes, and other plain-loving animals. These plateaus vary from 2,000 to 4,000 feet in altitude; but it is only those that form the bases of the mountains that reach the latter figure. The prevailing geological formation of the eastern division, as far as the 107th meridian on the southern boundary, and the 109th on the north, is the tertiary lignite; west of this it is cretaceous; and south-west of this are narrow belts which extend across the Territory at the foot of the Rocky Mountains, and are composed of jurassic and carboniferous rocks and Potsdam sandstone. This region is rich in limestone, slate, granite, and other lithological specimens fit for building purposes. The western division is of igneous origin, and displays all the eccentric peaks, ridges, terraces, rocky pinnacles, and picturesque valleys peculiar to such a formation. It is, in my opinion, by far the most pictorial section, and few jaunts are more interesting than one over its hills and dales and snow-enshrouded mountain crests.

The plains east of the mountains are treeless, except the few aspens and amantaceous trees that fringe the streams; but the mountains contain firs, pines, cedars, junipers, larches, and spruces. Timber is more abundant in the north-west part than elsewhere, particularly about the Kootenay and Flathead Rivers, and the result is that the region abounds with game animals.

The soil of the valleys, especially along streams, is fertile, but large agricultural operations cannot be carried on without the aid of irrigation, owing to the small quantity of rain that falls during the year. The abundance of rivers makes this operation comparatively easy, however, and when population increases, canals, like those in Utah, will undoubtedly cross the vales and make them blossom like a garden. The whole country is adapted to grazing, owing to the profusion of bunch and buffalo grasses, and this causes sheep farming and stock-raising to flourish. The principal sections now devoted to agriculture, though only on a small scale, are the Bitter Root, Blackfeet, Deer Lodge, Flathead, and Hell Gate Valleys; the upper divisions of the Madison and Gallatin Rivers; the valley of the Missouri River from the junction of the three forks to Sun River; and a tract about thirty miles wide along the eastern boundary of the Rocky Mountains from Sun River to the British American boundary. The total number of persons engaged in farming in this immense area is less than 2,500, and they sell their products to the towns and mining camps at good prices. The principal crops grown are wheat, oats, and barley, potatoes, and the ordinary roots and vegetables. Maize does not thrive except in a few localities, owing to the coolness of the summer; but the hardier fruits thrive admirably, and such berries as currants, strawberries, raspberries, whortleberries, blackberries, gooseberries, and kindred fruits, grow wild. To produce large and flourishing orchards of the *pomona* in all the western division, irrigation is necessary; but if they are planted near streams or at the foot of mountains where they can receive a generous supply of water from the melting snow, their products will equal any of those of the Atlantic States in flavour, and excel the majority in size, owing to the abundance of sunshine they can enjoy from February to October, and the non-existence of destructive worms.

The climate of the Territory is deemed conducive to health, owing to the bracing mountain air, the absence of malarial regions, the high elevation of the land, and the cool, snowy breezes that blow from the mountains during summer. According to the Government reports no section of the continent east of the Rocky Mountains shows so low a death rate as Montana, and while this may be largely accounted for in the fewer number of children and delicate women there, and the vigorous constitutions of the men, yet a great deal is due to the air and the excellent drainage of the valleys. The climate is so different in various sections, owing to the presence of mountains, that it is difficult to arrive at a mean for the entire Territory. Thus, at Fort Benton, on the Missouri River, in latitude 47° 52′ north, longitude 110° 40′ west, and possessing an elevation above the sea of 2,674, feet the average temperature for the year is 41° 97′, and the rainfall 12·17 inches. The average temperature for July, the warmest month, is 69° 8′, and for December, the coldest, 11° 3′. At Virginia City, situated in a southern basin having an elevation of 5,286 feet, and in latitude 45° 19′, the yearly mean is 39° 25′. For the warmest month, August, the average temperature is 61° 3′, and for the coldest, December, 18° 8′, while the rainfall amounts to less than 10 inches.

At Deer Lodge City, in the north-western basin, and in latitude 42° 26′, and having an altitude above the sea of 4,768 feet, the average annual temperature for two years was found to be 42°; the average for the hottest month, July, being 69° 7′, and for the coldest, December, 1° 5′; the yearly fall of rain and snow being 16·5 inches. Sixty-five miles north-west of this place, at Fort Owen, which has an elevation of 3,284 feet, the annual mean is 47°; so that the difference between sections but a short distance apart is quite marked. The thermometer goes as low as 30° below freezing-point in the higher plateaus during winter, and up to 95° in summer; but such extremes, fortunately, are not very common. A good deal of snow falls in the northern elevated regions, but in the sheltered valleys the fall is rather light, and this enables cattle to secure food abroad during the winter, unless in very severe seasons.

Montana is exceedingly wealthy in the precious minerals, being excelled only by California; but it may compare with the latter now, as many of its richest mines are supposed to be still undiscovered. Its yield in gold and silver from 1861 to 1875 amounted to 125,000,000 dollars, or nearly 9,000,000 dollars per annum. The placer diggings, which are considered very rich, are found on the tributaries of the Hell Gate, Big Blackfeet, Madison, and Jefferson Rivers, on the Missouri and its affluents, from the junction of the three forks to Smith's River, and on the bars of the Yellowstone River.

The principal gold-bearing quartz-mines are near Bannack, Helena, Highland, Argenta, and Virginia Cities; and silver is found chiefly on Flint and Silver Bow Creeks, on the tributaries of Hell Gate and Stinking Water Rivers, on Alder and Ram's Gulches, Ten Mile Creek, near Helena, and on Rattlesnake Creek, an affluent of the Beaver's Head River. Copper has been discovered in extensive ledges on Beaver Creek, near Jefferson City, on a branch of Silver Creek, near Butte City, and on the head-waters of the Musselshell River; yet but little attention has been paid to developing it, owing to the cost of transportation. Bituminous coal is very abundant near Bannack, Helena, Virginia City, and Deer Lodge City, and on the Missouri, Musselshell, and Yellowstone Rivers; and lignite is found scattered in deep beds over a large area. Iron, hematite, plumbago, and other minerals are also common, but no attempt has been made to utilize them.

The principal mountain ranges, which vary from 5,000 to 10,000 feet in altitude, are the Rocky, Little Rocky, and Bear's Paw Mountains; the Belt, Judith, and Highwood Chains, which form an irregular group of short, broken ranges; the Snow Mountains, and the Bitter Root Mountains, which divide Idaho and Montana. It is watered by numerous streams, several of which are navigable for light-draught steamboats for from 50 to 400 miles. The north-western part is drained by the tributaries of the Columbia River, and the remainder by the mighty Missouri and its many affluents. The latter stream is formed near Gallatin, in the south-western corner, by the junction of the Gallatin, Madison, Jefferson, and other rivers, and following a general north-easterly course past Helena to Fort Benton, turns east into Dakota, and forces its way through many gloomy precipices until it joins the Mississippi River at a distance of 2,908 miles from its source. The two rivers when united make one of the finest bodies of water in the world, their total length being 4,194 miles.

The Missouri, which drains an area of 578,000 square miles, breaks through the Rocky Mountains about 400 miles from its source, at what is called the Gates of the Rocky Mountains. These are a narrow gorge nearly six miles long, whose perpendicular walls of rock tower upward to a height of 1,200 feet, and are 450 feet apart. For the first three miles they are so steep that there is only one spot for a foothold between the summit and the water. The river is broken by a series of falls sixteen miles long, and having a slope of 80 feet, about 145 miles below the gates, and these check navigation on the lower reach. It is navigable from below almost to the Great Falls, a distance of 2,500 miles, and above them to Fort Benton, a distance of about 300 miles. The region surrounding it on the north is one of the finest game countries in the world, being frequented by hundreds of thousands of buffaloes, numerous antelopes, deer, mountain sheep and goats, wolves, and other animals, besides such birds as prairie chickens, geese, ducks, swans, and other species. Steamboats begin to ascend it from Sioux City, Dakota, early in April, and it requires a month to make the trip to Fort Benton.

The next river in importance is the Yellowstone, which rises in a lake of the same name in North-western Wyoming, drains the south and south-easterly portion of the Territory, and joins the Missouri in Dakota. It is navigable for steamboats during the summer for 300 miles above its mouth. One of its chief tributaries, the Big Rosebud, is also navigable for several miles.

The Territory contains about forty important rivers and several minor streams, which afford a convenient and excellent means of irrigating the lands adjoining them.

Charming tarns are quite common among the mountains and elevated valleys, and as all teem with the finest specimens of the icthyc fauna, they are favourite angling resorts. One of the handsomest in the country is Flathead Lake, produced by the Flathead River, which has an area of 360 square miles. Both streams and lakes are well stocked with trout that weigh from two to six pounds, and with pike, perch, catfish, white-fish, and grayling.

Montana is one of the finest game countries in the world, owing to its primeval condition, its combination of mountains and plains, the abundance of the *graminæ* and their persistent nature, and the wooded character of the hills. Among its highest game are the buffalo, which roam in thousands over the eastern plateaus, the antelope, elk, mule-deer, white-tailed deer, moose—the latter is hunted in organized parties by the Indians—the grizzly, black, and cinnamon bears, the mountain sheep and goat, two species of wolves, the panther, wild cat, beaver, otter, hare, fox, and small fur-bearing animals; and as for ducks, geese, swans, curlews, cranes, grouse, and other birds possessing high gastronomic qualities, they may be found in large numbers in all sections of the Territory. The only difficulty the sportsman encounters is that he is compelled to camp out in many places when in pursuit of the higher game, and this requires an outfit of a team or pack animals, and a guide.

The Territory contains several towns, one being established near every mining camp, and of these the most important are Helena, the capital, which has a population of 4,000; Virginia

City, which boasts 1,000; Deer Lodge, with 800; and such towns as Argenta, Bannack, Bozeman, Diamond City, Fort Benton, Gallatin, Missoula City, and Radersburg, whose number of inhabitants varies from 200 to 600.

From Virginia City I moved northward to Bozeman, Hamilton, Gallatin, Radersburg, and Deer Lodge, and returned from the latter place to Helena, having travelled a distance of over 500 miles from Franklin by stage and trading-waggon. The entire route traversed might be called mountainous, as the coach was scarcely in a valley ere it was out again on a hill. The scenery the entire way was interesting, being characterized by a savage grandeur or a gentle picturesqueness. Some of the vales resembled large parks, and wherever settlements were established they looked as cheerful as the garden-like plains of France. Cattle grazed over the terraces by the thousand in several places, but in others scarcely one was seen for a distance of many miles. Wildness and primitiveness characterized the expression of the land, and the most active energy the towns, for they were distinguished by an industrious aspect that places many times their size could not display in more sedate localities.

Life at Helena seemed to be exhausted in a very wasteful manner, for everybody appeared desirous of spending it in the most exciting manner possible. Drinking saloons were numerous, and generally crowded with miners, teamsters, and the higher social personages of the town, for drinking there is a virtue with those who would be considered genial or popular. Dancing saloons, or "hurdy-gurdies," as they are called in local parlance, in which coarse, bedizened wrecks of women tripped away the hours lightly in company with rough but generous miners, were common; and gambling-rooms could be seen in several places. The latter were largely frequented, and the tables covered with bags of gold-dust, nuggets, and twenty-dollar pieces. There was no riotousness, nor even noise, and the players lost or won large sums without displaying the least emotion. The favourite game seemed to be faro, and this was presided over by the "game-keeper," who sat on a high chair near the dealer, and saw that one man did not take the winnings of another, or try to cheat the bank. This individual, who is usually an experienced gamester, may have an interest in the game, or he may be hired by the banker at a large salary. He, like all professional gamblers, never touches liquor when on duty, although it is placed *ad libitum* at the command of the players; but they also are very abstemious when engaged in their exciting occupation. Some will not even touch a cigar, for fear it might distract their attention, while others are never without one, and are constantly enveloped in a cloud of smoke. The announcement is made in some rooms that "all drinks and cigars are free," but in others players are expected to pay for refreshments. There are two classes of these faro halls: one which plays a "fair deal," and the other where the "hogging" or cheating game only is known. The former is patronized by regular *habitués*, the latter by inexperienced strangers, and they are in most cases left penniless ere they quit the room. *Roulette*, *rouge et noir*, poker, and other games are carried on in the private back "parlours" of many of the drinking saloons, and dice-throwing over the counter may be seen in almost every one of them. The sums that change hands in a day there must be very large, for the majority of the thoughtless miners are addicted to gambling; so the result is, that those who may be quite wealthy one week may not have a penny the next, but that seems to make little impression on their volatile temperaments. The most dangerous places to visit are the dancing holes, where drunken men are likely to be robbed by the courtezans or assaulted by a combative and inebriated individual. Every dance costs the male terpsichorean one dollar, and he is expected to "balance his partner up to the bar and treat her" when it is finished. The women receive half the value of the drinks paid for, and if they can induce their gallants to ask for so-called champagne, they receive a certain sum on each bottle, and as this beverage costs from 5 to 10 dollars per bottle, one can understand what wages some of the creatures can make in a week. The streets of the city always present a bustling, interesting, and cosmopolitan appearance, as every nationality of Europe and America seems to be represented, and mingled with them are the yellow, almond-eyed Chinese, the black, curly-headed Negro, and the brown, straight-haired Indian, attired in his blankets and buckskins.

Helena boasts several churches, nearly every Christian denomination being represented, good common schools, and the omnipresent newspaper. There are some fifty ungraded schools in the Territory, and one classical academy; and to support the former costs over 50,000 dollars per annum. The libraries number 142, with over 20,000 volumes; and the newspapers amount to ten, of which three are daily, one tri-weekly, and six weekly. Good hunting and fishing can be obtained within a short distance of all the towns, and camp equipages and guides, if wanted, are easily procurable.

CHAPTER XIV.

THE YELLOWSTONE NATIONAL PARK.

A great wonderland—Its area, elevation, and character of surrounding mountains—Its grand falls, gloomy precipices, thousands of hot springs, vapours, and gigantic geysers—Magical ornamentation and colouring of calcareous terraces—Abundance of game and fish—An important geographical region.

I RETURNED from Helena to Virginia City in order to find some means of entering that great land of wonders, the Yellowstone National Park; but being disappointed in my search, I moved northward again to the vicinity of Fort Ellis, and was fortunate or unfortunate enough to meet there a party of miners, who were going on a prospecting expedition towards the Park, their purpose being to follow the course of the canyons of the Yellowstone River until they were assured that they contained no precious metals. They were well armed and equipped for a campaign against weather, hunger, and treacherous Indians; yet the latter finally prevailed, for they appeared in such swarms, and were so persistent in their attacks night and day, that after a fortnight's almost incessant skirmishing it was deemed best to return, for it was evident by the determined assaults of the Sioux that mining operations could not be carried on with any degree of safety or success. I was lucky enough to enter a portion of the Park afterwards from another direction; but as the place was first discovered in 1869 by a party from Helena, Montana, I prefer to speak of it here, although the greater part of it is situated in the north-western corner of Wyoming. To reach it from the East, persons leave the train at Cheyenne or Evanston, Wyoming, and march to Fort Ellis, which requires six days to perform, thence move up a canyon of the Yellowstone; but if the party is large, they may move in what direction they will. The safest route, I was told, was over the mountains from the Shoshone Falls, in Idaho, as the Indians there are not hostile. Should the Park be reached by eluding the hostiles, or beating them off, all further danger is over, as the red men cannot be induced to enter it, owing to their belief that it is the abode of the Great Spirit.

The Yellowstone National Park, which is certainly the most wonderful region in the world, has a length from north to south of 565 miles, a width from east to west of 55, and an area of 3,575 square miles; an area much larger than some German duchies, or such Atlantic States as Delaware and Rhode Island; it is, in fact, three times the size of the latter. It was first brought to notice by a party of surveyors from Helena, Montana, in 1869, and as soon as they reported its numerous natural curiosities, the Surveyor-General of the Territory organized an expedition and sent it in there the following year. The reports of the previous party having been confirmed by the latter, Professor Hayden, at the head of a Government scientific corps, entered it in 1871, and made a careful examination of its most remarkable features. His report induced Congress to pass an Act by which the district now known as the Yellowstone Park was reserved and withdrawn from settlement, occupancy, or sale, and set apart as a pleasure ground or public park for the benefit and enjoyment of the people, and placed under the special control of the Secretary of the Interior.

The Park has an average elevation of 6,000 feet above the level of the sea, and is hemmed in on all sides by mountains that range from 9,000 to 12,000 feet in altitude, and are perpetually enshrouded in snow. Owing to its height the weather is very severe there, except from June to September, and even then frost is formed every night, and the thermometer frequently falls to 23° or lower. This necessitates the use of warm clothing by all who visit it, and tents should be carried if possible. The entire region displays the most violent igneous action, and abounds in deep gloomy precipices, brilliant waterfalls, crackling lakes of brownish mud, and tarns as crystalline as a mirror, turbid streams of sooty water, and splendid rivers that abound with fish and numerous aquatic birds; springs that are as pure and cold as ice, and others so hot that they can cook an egg in five minutes; sparkling miniature fountains that gleam in the sunshine, and stupendous geysers that hurl the water into the air to a distance of from 50 to 200 feet; bracing air that arouses every nerve into action, and imparts to the mind and body an extraordinary exhilaration, and noxious vapours of sulphur, soda, salt, and other minerals that depress the spirits; every element which one might think of in a landscape may, in fact, be found there, and all in strong contrast. The region being wooded with towering evergreens of fir and pine in some parts, whilst others are as bare and desolate as a desert, the emotions aroused are so varied and conflicting that one cannot analyse them with sufficient accuracy to be able to state perspicuously their effect, beyond saying that the impression left on the mind by the scene is that of weird, savage grandeur.

The finest cataracts in this magical land are the two Yellowstone Falls, whose towering altitude and volumes of water make them the peers of any in the world, as they possess all the elements necessary to win our admiration. Having their birth in the Grand Canyon, one of the most stupendous precipices in the world, and being the product of a rapid stream that primarily takes its rise in a snow-enshrouded pinnacle, they have many qualities to attract the lover of nature; yet, on a first view, they only awaken our sense of awe and sublimity; but, as their picturesqueness reveals itself, the spectator gazes upon them with a feeling akin to familiarity. They unite in a remarkable degree sombre, savage grandeur, and bright, cheerful picturesqueness, so that one is swayed by opposite emotions, which take some time to comprehend. They have received the most extravagant praise from all who have visited them, and perhaps deservedly, yet they are inferior to the Pohono, Loya, and other falls of the Yosemite in altitude, and have far less power than the Snoqualmie or Shoshone, so that the superlative laudation they have received must be due as much to their surroundings as to their own qualities. The falls are one-fourth of a mile apart, and the opposite of each other in character. Above the upper fall the river flows tranquilly down through a meadow-like valley until it approaches the precipice, when it breaks into fierce, roaring rapids, and makes a sudden bound of 140 feet into the chasm ~~below.~~ About the middle of its descent it is checked by a jutting ledge, which carries it forward at such a sloping angle that it is thrown about 30 feet beyond the perpendicular base of the canyon. This double leap is exceedingly unique. The foaming water and dark clouds of floating spray produce rainbows in abundance, and on a fine day they are unusually brilliant. The smaller vegetation grows profusely wherever the mist is scattered, and its deep emerald hue makes a most charming contrast to the glaring white of the falls and the sombre aspect of the dark walls of the precipice.

After making this bound the river flows rapidly but smoothly through a canyon about 300 feet deep, whose bed is apparently as free from obstructions as one of the aqueducts of the ancient Romans. As the water glides onward the canyon spreads out to almost double its breadth above the fall, then suddenly contracting to a width of perhaps 150 feet, it piles the stream together in a solid, powerful body, which defies all obstacles, and rushing forward with a greatly-increased velocity, makes a sudden and unexpected bound down the sheer face of the precipice, a distance of 350 feet. This gigantic leap does not seem so grand as it actually is, owing to the massiveness of the canyon. The large volume and the intense force which it acquires in the terrific plunge cause the water to ricochet or rebound forward for about a distance of 200 or 300 feet. After striking the chasm below, and having lost its power by this reaction, it is shattered into diverging bodies, which tumble back with a loud thud, and, mingling with the boiling eddies, is again sent bounding onward in turbulent waves through the gloomy chasm. A heavy mist which constantly envelopes the falls in showery clouds of darkness prevents a person from reaching any nearer the base than 200 feet without being thoroughly drenched. It seems to be denser on the western side than on the opposite, as the grasses, mosses, and sedges which thrive there appear more luxuriant, and are of a most vivid green. This vegetation relieves the crags of their rude aspect, and introduces an element of gentleness that is much appreciated by the eye. Brilliant rainbows span the river and pierce the blackness of the spray, producing thereby a very novel effect, as one spot is all brightness and another all darkness.

The two falls present strong contrasts, being in fact the opposite of each other in expression; yet each has a beauty of its own which harmonizes most appropriately with its surroundings. The canyon through which they pour gives them, primarily, their element of magnitude; for, even in that land of chasms and precipices, it has no parallel; it is itself alone. Its average width below the lower fall is from 200 to 500 yards, and its height nearly 1,200 feet. Some twenty miles down it receives Tower Creek, which flows over its rocky bed for a distance of ten miles, then makes a sudden leap of 156 feet about 200 yards above its mouth. Deep in the cavernous gloom of the precipice, the tourist seems to be the merest pigmy—an atom so insignificant as to appear unworthy the product of Nature. Buried in its sombre depths, he feels as if he were in a new land—the land of gnomes and monsters who dwell amidst scenes of terror and darkness; and this feeling is increased by the many hot springs of alum, soda, sulphur, and sulphate of copper, which exhale strange and strong odours, and send jets of steam sailing up into the heavy atmosphere.

Hot springs are unusually numerous, it being estimated that there are about 10,000 of them in all, which vary in size from a well to a small lake. These are chiefly of two kinds, namely, those that deposit lime, and those that deposit silica. The temperature of the former averages from 160° to 170°, and that of the latter 200°, or more. The steam they exhale forms a heavy mist in the early morning, and its heat is so palpable that one gladly seeks it when he awakes stiff and cramped from a bed on the ground, and finds himself suddenly transferred from the warmth and comfort of blankets to the crisp, icy atmosphere of the valley. Wood left in the vicinity of the springs becomes silicified, or enveloped in a calcareous covering, in a short time; and rocks placed around their margins become groups of beautiful colours. The deposits around these terrestrial cauldrons are of many hues, and form an elaborate ornamentation worthy of the highest artistic mind, as they embrace combinations of all the curves, lines, and angles that it seems possible to make. The principal collections of the siliceous springs are in the upper and lower geyser basins of the Madison River, and of the calcareous springs in the region around Gardiner's River. Besides those enumerated, there are several other kinds that contain alum, sulphate of copper, iron, salt, magnesia, and carbonate of soda in such quantities that the air in their vicinity is permeated with their acrid odours.

The entire country lying between the parallels of 43° and 47° north latitude, and 110° and 114° west longitude, which comprises portions of Montana, Idaho, and Wyoming, may be said to be one vast geyser field, so that it is the largest in the world, the geyser region of Iceland and New Zealand sinking into insignificance beside it. It is also rendered more interesting than these by the numerous shocks of earthquakes which disturb it very frequently, and which, at some seasons of the year, are very common. The majority of the cauldrons are hot mineral springs and mud volcanoes, the geysers proper being situated in the north-western part of Wyoming on the Fire Hole River, and on the middle fork of the Madison, one of the three principal sources of the Missouri River. They are divided into two groups, known as the Upper and Lower Geyser Basins, the lower beginning at the junction of the two easterly forks of the Madison River, and embracing an area of thirty square miles. The springs in this latter basin are divided into three classes, namely, those that are always tranquil, those that are agitated only at particular periods, and those that are constantly boiling; but in the real geysers the waters are quiet until a short time before an eruption. Dr. Peale, a well-known scientist, has divided them into seven groups according to their various temperature, and the height to which those that spout throw the water.

In the first group, at the northern end of the basin, a number of springs occupying a space two miles long and one-fourth of a mile wide, have their temperature quoted at from 106° to 198°, while the temperature of the summer air is only 50°. These are mostly siliceous springs, a few being chalybeate; and some are geysers which project the water from 2 to 5 feet in height.

The second group, about two miles farther south, which occupies an area of three-fourths of a mile, ranges in temperature from 140° to 196°; and, being principally geysers, the water shoots upward from 5 to 10 feet. The chief of this family dwells on the slope of a hill, has a circumference of over 60 feet, a rim 5 feet wide and 5 feet high, and hurls a broad column of water 50 feet into the air. One, called the Thud Geyser, from the dull, muffled sound which it gives as the water advances and recedes, has a beautiful scalloped rim with basins around it. This group has been compared to a factory village, as the steam rises steadily in jets from a hundred springs.

The third group lies three-quarters of a mile south-east of the preceding, at the foot of a mountain spur, extending nearly half a mile up a narrow ravine, and covering a width of about 500 yards. The temperature of several ranges from 130° to 196°, and among them are scattered one iron and three sulphur springs, the only ones in the region. In the centre of the group is a small lake having an area of nearly two square miles, which has a geyser on its eastern shore that spouts the water from 15 to 20 feet upward.

Half a mile south of this, in a ravine, is the fourth group, which occupies a space a mile and a half in length, and one-fifth of a mile in width, and contains many springs and geysers whose temperature varies from 112° to 198°, the temperature of the air in summer being 60°. The principal geyser, at the mouth of the ravine, contains deep blue water, which is constantly agitated; and its basin, which is round, has a circumference of about 180 feet. When this is in a state of eruption a large column of water, accompanied by immense clouds of steam, is hurled upward to a height of 100 feet or more. It presents a splendid view when in vigorous action, and is one of the most interesting in the region.

The fifth group, on the banks of the Fire Hole River, is the largest of all, as it embraces an area of a square mile, and contains a large number of springs and geysers which vary in temperature from 112° to 196°; but none are very important.

The most attractive is one called the Conch Spring, from its resemblance to a shell, which has a triangular basin about 10 feet wide. The Horn Geyser, which has a crater shaped like a horn, is in a constant state of ebullition. The Bath Spring, which is of unknown depth, has a square basin 30 feet wide; and Cavern Geyser, whose basin has an area of 300 square feet and a depth of 20 feet, boasts of water possessing a bright blue tint. Mud springs, which vary from 3 or 4 inches to 100 feet in circumference, are very numerous in this group, and their contents range from turbid water to an adhesive mud of different hues, some being pure white, and others blue, brown, or black. Being constantly excited, they present a curious appearance, especially the smaller ones.

The sixth group occupies an open, marshy prairie, about two miles south-west of the preceding, and extends along a rivulet flowing into the Fire Hole River. The temperature ranges from 106° to 198°.

The seventh group, two and a half miles below the above, is situated on Fire Hole River. The largest has a basin nearly one-fourth of a mile in circumference, and below it is the Cauldron, which is almost always invisible at any distance, owing to the heavy clouds of steam that envelope it.

The upper geyser basin, which is about eight miles south of the lower basin, is not so large as the latter, covering only an area of three square miles; but it is much grander, and displays far more remarkable phenomena. The majority of the springs and geysers extend along both banks of the river for a distance of three miles. Their temperature ranges from 106° to 196°, the average of all being over 170°.

At the southern extremity of the valley stands the well-known Old Faithful, which spouts regularly every hour, and throws a column of water 6 feet in diameter a maximum height of 130 feet, holding it up from four to six minutes by a series of successive impulses, which have a spluttering sound. The larger body of water falls back into the basin, and flows over the edges and down the sides in streams. When the eruption ceases the water sinks out of sight, and nothing but the occasional hiss ot steam is heard until the time approaches for another effort. Its crater, which is a conical mound of geyserite about 12 feet high, is 20 by 54 feet at the top, and 145 by 215 feet at the base.

Opposite it, across the river, are two famous geysers, the Beehive and the Giantess. The former is a siliceous cone 3 feet high, having a circumference at the base of about 20 feet, and a top with an oval orifice having a diameter of 3 by 2 feet. It is in action about once in every twenty-four hours, and throws a column, which completely fills the orifice, to a height which Langford found by triangulation to be 219 feet. The eruption he witnessed lasted eighteen minutes, and the mass of water did not deflect more than four degrees from the vertical line. Professor Hayden saw three eruptions, lasting from four and a half to fifteen minutes; but he measured the column only once, and found it to reach to a height of only 100 feet. The stream was fan-shaped, and no water fell from it, as it was resolved into spray, which evaporated as soon as it was fully formed.

About 200 yards from this is the famous Giantess, the most interesting geyser in the region to many persons. This has an oval aperture 18 by 25 feet in diameter. When it is in a tranquil mood no water can be seen in the basin, although the sides are visible to a depth of 100 feet, but gurgling sounds are heard far below. When it is ready, or is preparing to spout, the water rises upward, spluttering, heaving, and hissing, and sending off immense clouds of steam; but ere making the final aërial bound, it sometimes stands for several minutes within a few feet of the surface, foaming and gurgling and spurting jets of steam and hot water nearly to the top. When it finally bursts forth, it hurls a column fully the size of the mouth to a height of 60 feet, and through this half a dozen smaller jets, varying from 6 to 15 feet in diameter, rise to a height of 250 feet. The eruptions are irregular, and usually last from fifteen to twenty minutes, so that one is able to enjoy to the fullest extent the grand and unique spectacle. Professor Hayden measured this, and found the basin to be 32¼ by 23½ feet in diameter, and the water, which was level with the rim, to be 63 feet in depth. This geyser differs in appearance at various periods, and the altitude to which it throws the water ranges from 40 feet upward.

On the same side of the river, farther down, is the Sawmill Geyser, which throws a stream of water uninterruptedly to a height of about 15 feet, and near this is the Grand Geyser, one of the largest and most powerful in the region. Its basin, which is 52 feet in diameter, contains two orifices, and its water is as clear as crystal. The eruptions of this mammoth liquid volcano, which are supposed to occur every thirty-two hours, is preceded by a rumbling and shaking of the ground and the shooting upwards of columns of steam; these are followed by the bursting forth of the hot water in successive jets, apparently 18 feet in circumference at the base and tapering to the top, which bound into the sky to a height of from 175 to 200 feet, while the steam ascends 1,000 feet or more, so that it looks like a huge pillar of vapour. This vast column is sustained in the air for about twenty minutes, when it gradually returns to its bed, then becomes quiescent. Near this is the Turban Geyser, which has a large basin of irregular form, and throws water to a height of about 20 feet every few minutes, but it is never wholly tranquil.

Near these are the Fan, Soda, Grotto, Riverside, and Punch Bowl Geysers, each having an individuality of its own, and scattered about are numerous less important ones which are yet unnamed. There are some wonderful and magnificent groups also on Gardiner's River and Shoshone Lake, and scattered over the adjoining country. Those on the river are the most astonishing calcareous deposits in the world, and all others pale into mere nothingness before them. Some of them cover two square miles, and in places form regular terraces 200 feet high, and ornamented with basins that display beadwork of the most beautiful colours traced on a snow-white ground. The appearance of this magical land, with its numerous columns of hot water and steam, boiling springs, detonating lakes, grand waterfalls, turbid streams and crystalline rivers; with its combination of desert and forest, plutonian precipices and towering snow peaks, frosty air and burning vapour, may be imagined, but no words can adequately portray it. Even after one has gazed upon it he cannot recall what pleased or astonished him most, there are so many things to appeal to his sense of the wonderful and the sublime. It would require a large volume to do justice to even a tithe of its great natural curiosities, which have no equals, or even prototypes, on this planet.

The Park is also one of the most interesting geographical regions on the continent, having within its limits, or in its immediate vicinity, the sources of mighty rivers and numerous streams which flow in various directions. Its northern section produces the sources of the Yellowstone River; its western the principal forks of the Missouri; its southern and south-western portions the headwaters of the Snake and Green Rivers; and its south-eastern those of the tortuous Wind River. Its most important tarn is Yellowstone Lake, which has a length of twenty-two miles, a width of fifteen, and an elevation above the sea of 7,788 feet. This is stocked with fish, many of which show excellent game qualities. The land game in the Park is unusually abundant, and embraces bears, panthers, buffaloes, several species of deer, wolves, and kindred animals; and the feathered tribe is numerous enough to satisfy the appetite of the most insatiable fowler. Swans, geese, ducks, and some of the grallatores raise their young there, and as they know nothing of the presence of man, mother and brood may be caught sometimes with very little trouble. As a ground for recreation, in every sense of the word, it has no peer, nor is there any to approach it in its array of numerous and magical attractions.

CHAPTER XV.

THE PHYSICAL GEOGRAPHY OF UTAH.

Area and population of the Territory—Localities devoted to agriculture—Crops produced—The grazing facilities of the country—Its mountain ranges, geology, climate, mineral wealth, and mining districts—Its principal rivers and lakes—Sketch of Great Salt Lake—Abundance of game and fish—Best trout streams—The railway lines and their connections—The city of Ogden—Beauty of the region around Salt Lake City—Plainness in face and dress of Mormon women.

I RETURNED from Montana to Franklin, Idaho, thence took the Utah Northern Railroad as far as Ogden, and found myself again in Utah.

This Territory is bounded on the north by Idaho and Wyoming, on the south by Arizona, on the west by Nevada, and on the east by Wyoming and Colorado. It has a length from north to south of 350 miles, a breadth from east to west of 260, and a total area of 84,476 square miles. It is divided into twenty counties, and has about the same number of large towns and cities, which range from 1,000 to 30,000 in population, besides many villages, and its total number of inhabitants may be estimated at 150,000, the majority of whom belong to the Mormon Church. It is divided into two unequal parts by the towering Wahsatch Range, which runs through it in a general direction of from north-east to south-west, and these are again subdivided by mountain chains varying from 6,000 to 13,000 feet in altitude. The surface is generally high, rolling, and irregular, the valleys having an elevation of from 4,000 to 6000, feet above the level of the sea. The western portion, which belongs to the great basin, is a series of plains or disconnected valleys, formed by ridges or the cutting away of mountain spurs, and have a north and south direction. The eastern part is very mountainous, and is traversed or watered by numerous streams; but, as they run through deep canyons, they are not so convenient for irrigation as those in the western division. The south-eastern part, which is less rugged than any east of the main range, consists of broad, undulating plains or small, depressed valleys. The soil is deep, fertile, and moist enough around lakes, springs, and streams to produce good crops without irrigation, but the plains in their natural state are for the most part hard, dry, and barren, frequently overlaid with saline incrustations, and often covered only with sage brush and tufts of sand grass, and the famous gramma, or buffalo grass. The valleys are principally treeless, except where planted with orchards and coppices, but the mountains, in some places, are luxuriantly clad with cone-bearing evergreens. The chief settlements in the Territory are scattered along the western base of the Wahsatch Range, and south in the valley of the Rio Virgin, where an extensive system of irrigation is carried on by means of canals. The localities devoted specially to agriculture are the Salt Lake Valley, as the tract along the south-east shore of the great lake is called; the basin of Utah Lake, especially on the eastern side; the Rush Valley, west of this; the Weber, Tooele, and Cache Valleys; and, towards the south, the San Pete, Sevier, and Rio Virgin Valleys. The country east of the Wahsatch Range is little known, but from recent explorations it has been learned that good arable land exists along the Uintah River, and the tributaries of the Colorado of the West. All the farming regions are occupied solely by Mormons, and they do not want gentiles among them. The principal crops raised are wheat, oats, barley, rye, the ordinary fruits, roots, and vegetables; but in the southern section, cotton, figs, pomegranates, and semi-tropical plants thrive well, and the mulberry-tree attains such a vigorous growth there that it is intended to try the experiment of rearing silkworms. The crops in the north-western portion have suffered from the attack of grasshoppers occasionally, and caterpillars sometimes injure fruit-trees.

The Territory is well adapted to grazing, as the sand and the buffalo grass grow profusely, and the white sage, when touched by frost, is said to furnish excellent pabulum to cattle. The herdsmen drive their flocks to the mountains in summer, and return to the valleys with them in the winter, for they can roam abroad in these sheltered vales without much care on the part of the owners, as the grass retains its nutritive qualities persistently.

The climate of Utah is varied enough to suit all tastes, it having a different climate in its different divisions. In the north it is quite cold in the winter, but in the south it is warm and sunny. At Salt Lake City the average annual temperature for several years has been found to be 51°; for July, the hottest month, 77°, and December, the coldest, 27° 3′. The maximum temperature observed ranged from 94° to 98°, and the minimum to 3°. The rainfall averages about 15 inches. The climate is considered to be healthful, fevers and consumption being, comparatively speaking, little known, and rheumatism is not very prevalent.

Further west, at Corinne, the annual average temperature has been placed at 49° 2′; for July, the hottest month, the average is estimated at 75°, for December, the coldest, 26° 6′; and the rainfall is estimated at 17·13 inches. Rain falls from October to April, but it varies from 8 inches in the south-west to 20 in the north-east. The weather in spring and autumn is changeable, and snow falls largely in the more mountainous region, but in the sheltered valleys it is seldom heavy enough to check travel, except where it is swept into mounds by the wind, or piled up in canyons.

The varied topographical conformation of the country gives it a strong individuality, and its scenery is as diversified as its climate and productions. Its mountain ranges are majestic in their ruggedness and altitude, and some are made more interesting to many by their beds of precious and useful minerals. The principal chains are the Wahsatch, which runs throughout its entire length at an elevation of from 8,000 to over 13,000 feet; the Uintah, which extends eastward from the Wahsatch Range to the southern border of Wyoming; the Roan or Book Mountains, which run east into Colorado; the Little Mountains, which cross it in a north-west and south-east direction from the Wahsatch Range; the Sierra Lasal, on the eastern boundary; and south of this the Sierra Abajo and Orejas del Oso. The Sierra Panoche and the San Juan Range are near the southern border, and between them rolls that deeply-buried river, the Colorado of the West. West of the Wahsatch Range are several chains, the most important of which are the Guyot, Goshoot, Pijarajabi, Oquirrh, and Raft River Mountains.

The principal geological formations of the country are the cretaceous, triassic, jurassic, tertiary, cambrian, eozoic, silurian, and alluvial. The two first formations prevail in the south-east; the Wahsatch and Uintah Ranges are cretaceous, triassic, and cambrian; the extensive dessert west of Salt Lake is alluvial, and the remainder is tertiary.

The most valuable deposits of precious metals thus far found in the Territory are in the Wahsatch and Oquirrh Mountains, whose sides are seamed by deep, narrow canyons, which open into the Jordan Valley, and these are easily reached by rail from Ogden and Salt Lake City. Lead ores, bearing silver in small quantities, were discovered as early as 1858 by the Mormons, in Beaver County, but it was not until 1863 that lead ores carrying valuable quantities of silver were discovered accidentally by a party of Californian volunteers, in Brigham Canyon, in the Oquirrh Mountains. This unexpected discovery led to gulch mining for gold in the same place in the year 1868, but it was not until the notorious Emma Mine was found in the Little Cottonwood Canyon that the great mining excitement commenced. This led to such an influx of miners and speculators that thirty smelting and refining works were in operation within a short period of time, and railroads were constructed to bring the precious metal to the routes of travel. Everybody was smitten with the mining mania, and even Mormons, who had been taught by their leaders to look upon gold as dross, forgot the advice, and launched into the sea of excitement so enthusiastically that many of them made a fortune in a short time. The enthusiasm then aroused has abated but little since, and men are now clambering up steep hills and crawling down deep precipices in search of "big strikes." The advent of these gold-loving gentiles bodes no good to the Mormon Church, as they have already produced important changes in the social and political life of the Territory, hence they are abused roundly by the Mormon leaders, and no epithets are too vile for them.

The total yield of minerals from 1868 to 1876 was valued at over 26,000,000 dollars; and so rapid has their development proceeded that they increased from 600,000 dollars in 1868 to nearly 4,500,000 dollars in 1875. The returns of the various metals up to the last-mentioned year showed the yield of gold to be 1,547,292 dollars, silver 15,925,485 dollars, and lead 4,644,345 dollars; but these do not include the precious minerals extracted from copper. The placer mines can be worked steadily, owing to the large fall of rain and snow on the mountains, which furnishes the streams with plenty of water in summer and autumn. The ores worked are principally argentiferous carbonate of lead and galena, and some copper in the southern section. The chief mining districts at present are Parley's Park, Big and Little Cottonwood, and American Fork in the Wahsatch Range; West Mountain or Bingham, Dry Canyon, Ophir, and Camp Floyd in the Oquirrh Range; Tintic and West Tintic in the Tintic Mountains; the South Star and North Star, San Francisco, and Lincoln in the south-western district of the country.

Coal has been found extensively in the San Pete Valley, ninety miles south of Salt Lake City, and iron, copper, and other useful minerals are known to be very abundant; but so long as the precious metals are common, the less important will receive little attention. The mineral wealth of the Territory is still unknown, as a large portion of it is yet unexplored; but, judging from its geological formation, it should be very great.

As a field for emigrants, Utah has few advantages to offer, unless persons follow the lead of capitalists and devote their attention to mining and stock-raising, as the Mormons own all the fertile land, and they are bitterly hostile to the advent among them of all persons but such as belong to their own faith. As they have not yet pushed much into the eastern divisions, industrious people might secure farms there along the course of streams, but they would be far away from a market.

The grandest scenery in the Territory is found along the banks of the large rivers that traverse it in every direction. At their head stands the magnificent Colorado, which is formed in Piute County by the junction of the Green and Grand Rivers, and flows south into Arizona. This is buried in cavernous precipices in some places, yet its angry roar can be heard distinctly 1,200 feet above. Its course carries it amidst the emerald grass and the trees of the north, and the arid plains and cactus-covered plateaus of the south. Some of its tributaries have very queer names, those given by the Spaniards recalling goodness, and those given by the Americans the opposite quality. Thus one of its affluents is called the San Juan, and another the Dirty Devil; and muddy enough it certainly is in spring to be fully entitled to its cognomen. The other leading streams in the eastern section are the Green River, which enters the Territory from Wyoming in the north-east, and flowing south to a junction with the Grand River, receives in its course the waters of the White, Uintah, and San Rafael Rivers, and some minor streams. The Grand enters it on the east, near the centre, from Colorado, and flows south-west. The south-western portion is watered by the picturesque Rio Virgin River, which flows south-west, and empties into the Colorado in Nevada.

The most interesting bodies of water in the western division are the lakes, some of which are exceedingly interesting, as those having no outlet are strongly alkaline. At their head stands Great Salt Lake, in the north-west part of the Territory, near the city of the same name. This has a maximum length of seventy-five miles, a width of thirty-five, and a circumference of 291 miles. It contains six islands, the sum of whose circumference is ninety-six miles. The largest is Church Island, which has a length of sixteen and a width of five miles, and whose loftiest peak has an altitude of 3,000 feet above the level of the lake. This is connected with the mainland by a compact shoal of sand. Ten miles north of this is Fremont's Island, which is fifteen miles in circumference, and has a peak 1,000 feet high; and fifteen miles beyond it is Stansbury's Island, which is the second largest of the group, it being twelve miles long, thirty miles round, and displaying a peak having an altitude of 3,000 feet above the lake. The other three are Hat, Dolphin, and Carrington Islands. The water of the lake is so dense that persons can float in it easily, it being excelled in this respect only by the Dead Sea, for while the latter contains 24·580 of solid contents in 100 parts by weight, the former has 22·422, divided as follows:—chloride of sodium, 20·196; sulphate of soda, 1·834; chloride of magnesium, 0·252; and chloride of calcium, 0·140. Bathing stations are numerous enough around it, and a plunge into its briny fluid produces a delightfully tonic sensation.

The lake rises and falls at various periods, and its fluctuations may be inferred from the fact that steamers now pass over places where men and cattle crossed a dozen years ago. The water has been rising gradually since 1856, for previous to that time men could walk over to Church Island without wetting a shoe. Steamers now traverse it in every direction, and an excursion on one of them in summer is delightful, as the air is crisp and bracing, and the short waves are constantly soughing like those of an inland sea. Tawny plains, emerald vales, and snow-enshrouded pinnacles surround it, and present such a varied scene that one does not readily tire of it.

The Utah Western Railroad connects the lake with the Mormon capital, so that it is easily reached. Forty-five miles south of this is Utah Lake, both being connected by the Jordan River. This beautiful body of pure fresh water has an area of 130 square miles, is full of fish, and is hemmed in by high mountains. It is fed by several streams, the most important being Salt Creek, Spanish Fork, and the Provo or Timpanagos River. That this should be fresh, while its greater sister should be salt, although it receives the waters of the Jordan, Weber, Ogden, and Bear Rivers, is somewhat puzzling to many, even if scientists have attempted to explain it. Bear Lake, a large and handsome body of fresh water, about twenty-five miles long by ten in width, is partly in Utah and partly in Idaho. One hundred miles south-west of Salt Lake is Sevier Lake, a fine tarn having a length of thirty-five and a width of ten miles. This is formed by a river of the same name, which rises 200 miles to the south, and flowing in a tortuous course to the north, drains, with its tributaries, a large area of country. South-east of the preceding is Beaver Lake, which receives the river of the same name; and other interesting tarns are Little Salt, Stockton, Pangwitch, and Fish Lakes, the three latter containing fresh water.

The fresh-water lakes and all the streams abound with fish, at the head of which may be placed the various species of trout, which are famous for their size and game qualities. Utah Lake may be said to be almost "stiff" with the mullet, chub, trout, and the so-called mountain herring, which, though captured in enormous quantities, show no diminution in numbers. The Jordan River, one of its affluents, contains white fish, chub, and trout, and some imported species.

The Weber River, near Ogden, is one of the finest trout streams in the Territory; but Bear River and Lake may be said to excel all others, as the salmon-trout there weigh from four to eight and even twelve or more pounds, while their flesh is solid, yet as delicate as that of the small mountain trout. Large flocks of ducks, geese, swans, pelicans, and other natatores frequent the streams and lakes, and the curlew, snipe, grouse, quail, and other families are largely represented everywhere. The higher game includes the bear, elk, two smaller species of deer, the antelope, wolf, fox, hare, and small fur-bearing animals, but they are not near so numerous as they are farther west in Idaho, Oregon, and Washington Territory. The best initial points for sportsmen to start from are Ogden and Salt Lake City, as railroads radiate from these in every direction. The principal lines are the Central and the Union Pacific, which traverse the Territory from east to west, meeting at Ogden; and from this point also the Utah Central, thirty-seven miles long, extends to Salt Lake City, whence the Utah Southern, seventy-eight miles long, runs to York, and the Utah Western, twenty-five miles, to Lake Point. The Utah Northern, having a length of eighty miles, extends to Franklin, Idaho; the American Fork Railroad, which connects with the Utah Southern, to Deer Creek, sixteen miles distant; the Bingham Canyon Road, from Sandy on the Utah Southern to Bingham Canyon, twenty miles distant; the Wahsatch and Jordan Valley Railroad, ten miles long, from Sandy to Fairfield; and the Summit County Line from Echo on the Union Pacific Road to Coalville, a distance of eight miles. These will take tourists and sportsmen among the mines and into the most interesting parts of the Territory. There are 500 miles of railroad in the country, of which 274 miles belong to the Mormon people.

Ogden, which is the great railway centre of the Territory, is the second city in size, its population being estimated at over 6,000. It is situated in a sloping vale, close to the mountains, and commands some fine views. Many gentiles do business there, and their enterprise and capital have raised it from a sleepy village to a bustling, interesting town. Like all places in the West where railways concentrate, it seems at first sight to be composed solely of cheap hotels and restaurants, but a closer inspection reveals several large establishments which supply goods to the surrounding country. When the trains from the shores of the Pacific and Atlantic meet there, no town of its size in the world can present such a cosmopolitan appearance, for on the railway platform may be found specimens of every nation in Europe and South America, and many representatives of the Orient, while every type of humanity peculiar to the United States, including Indians, half-breeds, negroes, and Chinese, are mingled together, and make an ethnological *olla podrida*, that changes in hue like the parts of a kaleidoscope. The Utah Central Road extends from this town to Salt Lake City, and trains run twice daily between both places. These are generally well filled in summer with eager tourists, conspicuous among whom are the numerous natives of the British Isles and the colonies. No portion of Utah displays to such good advantage the patient industry of the believers in Mormonism as the space traversed by this road, for it is literally a highly cultivated garden, or a verdant meadow; yet every inch of it has had to be irrigated for several years with a perseverance which few other people could display, except, perhaps, the Egyptian *fellahs*. A glance at the region reveals to the eye snow-crested mountains with sloping terraces, waving carpets of emerald grass, over which cattle roam in large herds; thousands of acres rich in growing cereals; coppices of white-blossomed fruit-trees, which dot the plain in every direction, and the dark blue waters of Salt Lake; the whole landscape presenting a scene of surpassing loveliness. The houses, which are generally small and built solidly of adobe, have an exterior air of comfort, and are usually graced by the presence of some frowsy women, and several tow-headed children with soiled garments and unkempt hair, who seem to be arranged in years like the steps of a ladder, though occasionally two or three seem to be of the same age. The Mormons of both sexes carefully avoid conversation with the gentiles in the cars if they should be placed near each other; but this the former try to prevent if possible, so they herd together, and atone for their feeling against the ungodly by calling each other "brother" and "sister," and discussing the difficult points raised at the last meeting of the Bible class. The women, who are certainly as plain-featured as a body as any to be found on the continent, look subdued, and present a slattern appearance in their plain, antediluvian garments, many of which are composed of home-made cloth. While modesty of attire is commendable in the gentle sex, when it is carried to the extreme apparent in Utah it is a virtue run to vice; for, as a rule, the women do not even attempt to set off their sober dress by a bit of ribbon tastefully arranged, by a loop that would break the rigidity of the straight line, or by a simple flower.

CHAPTER XVI.

AMONG THE MORMONS.

Salt Lake City—Contrast between Mormons and gentiles—Services in the Tabernacle—Sermons of the Mormon leaders—Opinions of two fanatics—Interview with Brigham Young, Vice-President Smith, and an "Apostate"—The organization, doctrine, and teachings of the Mormon Church—No salvation for old maids—The forfeit of gallantry—A trip through Southern Utah—How Mormons are watched by the bishops—Their ideas of Brigham Young—The next halting-place of the Church—Eastward once more—Opinion of a Mormon bishop—The wild scenery of the canyons—Character of the country—Reach Wyoming.

I REACHED Salt Lake City in the evening, and taking a seat in a large omnibus, was driven to a hotel. My first impression of the place was most pleasing, for every private house was surrounded by a flower-garden and an orchard; the streets were shaded by umbrageous maples and honey-acacias, whose rich and heavy perfume permeated the air; all the thoroughfares were exceedingly wide and clean, and streams of water poured along the gutter-ways and kept them free of all pestilential garbage. Thrift, comfort, and apparent contentment were visible everywhere, and the roominess of the space between the houses proved that they were built when land was cheap, and family privacy was an article of faith.

During the evening the main business street was ablaze with light, and brilliant shops were thronged with purchasers. The fashionable quarter was full of life and bustling excitement, yet a few yards away the private streets were as quiet as those of a sybaritical city. It was an easy matter to detect amongst the throngs the hated gentiles, for the ladies, escorted by cavaliers, were richly dressed, and their merry laughter rang out clearly in the resonant night air, while their Mormon sisters moved along in subdued groups, as if it were a sin or a crime to be joyous. During my stay in the country I do not remember seeing a merry, dashing Mormon girl; and as for the men, the majority of them looked too sour and weazened to be able to laugh, even if they wished to indulge in such unusual exercise. It is, I believe, a canon in the Mormon faith that a love of dress is a sure sign of being possessed by the Evil One, and the unfortunate woman displaying such a propensity is deemed to be on the road to perdition as surely as her gentile sister.

The day after my arrival being Sunday, I went to the Tabernacle to see the religious services of which I had heard so much; but as they had not commenced then, I loitered around among the motley groups that were seated on the granite rocks that strewed the enclosing yard. Their garments seemed to represent every style of dress worn since the time of the Flood, yet not a few, especially those worn by the feminine natives of Norway, Sweden, and Denmark, were rather picturesque, owing to their quaint cut and variety of colours. Every nationality of Europe, and every portion of the American continent, appeared to be represented there, and the variety of tongues recalled to my mind the Tower of Babel. In one corner could be heard the nasal twang of the old-time Yankee, or the peculiar accent of the former poor white of the Southern States; in another the burr of the north-country Englishman, the consonantal roll of the Cymric-speaking Welshman, the confused whirr of the Lowland Scotchman, and the odd brogue of the Ulster Irishman; while from others came the guttural tones of the Teuton, the lighter intonations of the Scandinavian, and the soft, mongrel Spanish spoken by Mexicans.

I doubt if any religious edifice in the world could show such an array of various tongues and nationalities within its bounds at one time as this gigantic Tabernacle, with its accommodation for 13,000 people, yet all seemed to be welded together by a common purpose. As soon as the services were announced, I entered the building with a group of Mormons, and took a seat beside them, some distance from the pulpit. I noticed that the best dressed persons as they entered were shown to the front seats by an usher, and these I subsequently learned were gentiles, that portion of the house being set apart for their special benefit. After an overture by the grand organ and a hymn sung by a well-trained choir of forty-eight voices, one of the Twelve Apostles raised his hands high above him, turned his eye toward a fly on the ceiling, and in long-drawn, sing-song tones repeated a prayer in which the Omnipotent was asked to bless and prosper His chosen people, the Latter Day Saints. When this was finished, a Mr. Pratt, also one of the apostles, harangued the audience in a most vigorous manner, advising them to have nothing to do with those imps of sin, the gentiles, who were worse than the most wicked Babylonians, and whose advent amongst them had been the cause of so much evil. He then touched on the power and efficacy of the laying on of hands; the good Mormons had done in purifying religion and freeing it from the abominations of a hired, self-seeking priesthood; the importance of being submissive to their spiritual teachers; and closed his peroration by advising them not to seek for worldly power and pride, and by a most fulsome laudation of Brigham Young, who occupied the president's seat in front.

He was followed by Geo. A. Smith, the vice-president of the church, but the latter merely took up the thread of the discourse dropped by the former. He praised the Mormons; railed at the Federal Government for not allowing them to govern themselves politically; denominated the gentiles the ungodly persons who had come among them to steal their goods and dishonour their families; and suggested to them that they had no right to dwell among a good and pious people, who abhorred sin and lived according to the dictates of the Bible. Some of his statements about wives and daughters were brutally coarse, and, I doubt not, made many gentiles hang their heads with sympathetic shame. Another prayer, a hymn, a benediction, and the ceremony was over.

At 2 p.m. I went to hear Brigham Young preach, and vulgar as I thought the assertions in the morning, I must say that those uttered by the Prophet, Seer, and Revelator were much worse; they were, in fact, so shockingly indecent that I wondered that any woman could listen to them. Some gentiles could not, so they and their escorts left the building, and when the majority had gone he applied the vilest epithets to them. The whole harangue was a combination of blasphemy, scurrility, and the most vulgar indecency; yet not a Mormon maiden, so far as I could see, blushed at this insulting chattering, whilst those who bore wifely looks seemed as indifferent to the vile words as the surrounding walls. Had the same iniquitous language been used in any other civilized city the speaker would have been tried in a court of justice for defamation of character, blasphemy, and indecency. Several of the men appeared to think it a most invincible assault on the gentiles, however, judging by their pleased smiles, and one little fellow who sat near me gave me a poke in the ribs and said, "That 's the way to give it on to 'em; nothink can stand that. We 'll drive 'em to —— before we get through with 'em." As I did not enter into any display of feeling over the matter, he eyed me closely, scanned me from top to toe, then turned round and spoke to some men beside him, and they in turn stared me full in the face.

When the services were over, the little fellow, who said he was a Yorkshireman, told me that gentiles were not allowed to sit among the chosen people, as the front seats were kept for them. I replied that I was sorry not to have known it, and he responded by saying that no harm was done as I was evidently a stranger. I asked him what difference that made, and he answered that every word uttered among themselves was spread abroad by the Salt Lake gentiles, and they were by this means creating a prejudice against them all over the country.

"They tell a million lies a day of us," said he, with emphasis, "although we are the best people in the world, and don't allow whisky-drinking or immorality among us. We are the Lord's chosen people, and we will yet own the whole world, and all your people will be our servants in the future life, if any of you can get to heaven."

I thought this was the language of a fanatic, but when I learned that the speaker had been a missionary to England for some years, and that the Prophet had taught such doctrines, I ceased to wonder, and asked him in what portion of the Scriptures he found such statements. He replied that they had been revealed to the Prophet, and that he had also been informed that Napoleon I., General Grant, Queen Victoria, and the Emperor of Germany would be his own servants if he wished to have them. He was getting interesting, so I asked him if he believed in polygamy, and he replied most positively that he did, as the highest purpose of man was to people the Lord's kingdom, and that men were only honoured and blessed according to the number of their wives and children. I asked him how many wives he had, and he replied "seven;" but the number of his children he could not state, as he had not counted them for two years. He had been a Mormon twenty-five years, and as he commenced with two wives he thought he might have nearly a score living. When I looked astonished at this statement, he said he was proud of his family; that he was not like a majority of the Americans, who looked upon children as a curse. He then quoted glibly the average number of children in the New England families, and proved to his own satisfaction that the descendants of the Puritans would soon be wiped off the face of the earth for their wickedness.

During our ramble and conversation we met another individual, who was introduced to me as Bishop Somebody or other, and when we resumed talking he joined in with a vehemence most delightful to behold. He said his people were the best, the smartest, and most astute on earth; that "my people" could do nothing with them; that if it were necessary they could produce devils, fighters, lawyers, or angels, according as they were wanted; and that the gentiles, who were the children of perdition, would yet flee to the Mormon church as the only refuge to secure salvation. While this flow of words was escaping, we passed a church in which services were being held, and this aroused both my companions into a state of frenzy.

"Hear those wicked Babylonians shout!" said the Bishop.

"Yes," said the other, "thim's d——d howling Methodists, as don't do anythink but holler as if they were lunatics, and lie about us when they gets through with their hypocritical gabble as nobody understands. I can stand the Catholic Church and the Church of Hingland, because they've dignity, and don't holler 'emselves 'oarse, as if the Lord couldn't 'ear 'em; and I think He don't them 'owlers as you've 'eard, because they lie so much about us and our holy Prophet, the best of men."

Having reached my hotel at length, the two orators bade me good day, after telling me to walk around the city, and not to be afraid of any harm happening to me, and suggesting to me the advisability of calling on President Young the next day. As I had a letter of introduction from a former intimate friend of his, I told them I intended to do so; and when I announced to them whose credentials I bore, they cast a knowing glance at each other and walked rapidly away.

The next morning at eleven o'clock I called at the Lion House, and sent in my name by a servant, and a minute later I was in the Prophet's studio, a quiet, cosy, and unostentatious room. He greeted me cordially, though in a dignified manner, and when he read my letter of introduction, told me that anything he could do to make my stay pleasant would afford him pleasure. He said that he was always glad to meet strangers who were visiting the country, and was willing to show them any kindness he could, but that in most instances he was repaid in slander, contumely, and sarcasm. I asked him if all persons treated him in that manner, and he replied that nearly all did, especially newspaper writers and bookmakers. He related the case of two famous English authors, whom he refused to receive at first on account of the innumerable falsehoods reported about himself and his people; but when he learned that they considered themselves gentlemen, and not journalistic scribblers, he granted them an interview, furnished them all the information he could, and placed passes over his railroads at their command, yet they reciprocated his kindness by slandering him in the foulest manner. He said that a class of English lords were the only truthful persons he met, and, as an instance of this, stated that Lord R——, who had been present at a Mormon ball at Provo, told him that he had never seen a more contented, well-behaved, and intelligent body of common people than those he saw in the town assembly-rooms.

"If we had men like that came here often," said he, "we should soon be known to the world for what we really are—a sober, chaste, God-fearing people, whose only desire is to be let alone, and to be allowed to worship the Creator according to the dictates of our conscience."

I asked him if all lords were so fully impressed with the happiness of the people, and he stated that he did not know, as many, after a tour through the country, did not renew their visit; but, as they were not newspaper writers, he supposed they were really impressed with the prosperous condition of all classes. In response to the query if the church was increasing in numbers, he said that it was, and very rapidly, and would continue to increase until the end of time. When asked if the gentiles were not exercising a baneful influence on its progress, he replied that they might cause a few thoughtless persons to apostatize, but for every one lost they gained fifty, and that converts were flocking into the country from Europe by the shipload almost every month. I insinuated that some young men might object to polygamy; and he replied, "Your people have an exaggerated idea of the number of wives men have. Just see for yourself from the Government report of 1870. I may add, however, that females have increased rapidly since then in the community."

From that report I gleaned that the population of the Territory was 86,786 (it is over 150,000 now), mostly whites; and of that number 56,084 were natives of the United States, and 30,702 of foreign countries. The males numbered 44,121, and the females 42,665. Of the natives, 41,426 were born in the Territory, and the remainder represented every State and Territory in the Union. Of the foreign population, 20,772 were natives of Great Britain and Ireland, of whom 16,073 were English, 2,391 Scotch, 1,783 Welsh, and 502 Irish dissenters. The other nationalities represented were British America with 613, Denmark with 4,957, Sweden 1,796, Norway 613, Switzerland 509, and some other countries with a small representation.

The number of families in the Territory was 17,210, with an average of 5·04 persons to each; and the number of houses 18,290, with an average of 4·75 persons to each. Of the persons over ten years of age, 2,575 could not read, 7,363 could not wirte; and of this total 3,334 were natives and 4,209 foreigners.

The ignorant among the latter were chiefly English, Welsh, and Irish, nearly all the Swiss, Scotch, Germans, and Scandinavians being either fairly or well educated. There were only twenty-nine blind, twenty-five insane, eighteen deaf and dumb, and twenty-three idiotic persons in the community; and the Prophet called attention to these figures as a proof that polygamy did not tend to deteriorate the species. Of the total population engaged in occupations, nearly one-half were farmers or stock-raisers; one-fifth were in personal and professional services, and the remainder in trade, transportation, manufacturing, or mining.

The President said that the aim of the Mormon church was to turn the attention of the people to agriculture, so that they might have their own homes and work for themselves only, and that they might take an interest in beautifying the land, and making it an earthly Paradise. "Besides that," said he, "it will prevent the gentiles from driving out those who have made the country the garden that it is."

I asked him what class of people generally became converts to the Mormon church, and he replied that the Americans, English, Scotch, Welsh, and Scandinavians were most numerous, they being the most intelligent people in the world, and therefore the quickest to accept divine truths. I then suggested that the absence of French, Irish, Italians, and Spaniards was quite marked; and he replied that these were so much under the control of the priesthood that they could not break away from their slavery. "Catholics," said he, "are, as a rule, so steeped in ignorance that they cannot be made to reason on truths, and nearly all object to polygamy, although we do not enforce it as a necessary belief to obtain membership in the church. As for the Irish," said he, "we do not much care for them, as they are stubborn, combative, and not amenable to the discipline of the church; yet some of our smartest men came from Ireland, and they are our best writers in discussing our faith." As a mark of what confidence he placed in them when thorough believers, he referred to a Mr. Sloane, who was their "best journalist and staunchest defender." After a further desultory conversation he told me that any information concerning the church or the Territory would be furnished me by the Vice-President, George A. Smith, who was the public historian; and that he would place a person at my command the next day who would show me over the Tabernacle, the grand temple in process of construction, and such places around the city as I wished to see. Thanking him for his kindness, I shook hands and retired, rather prepossessed in his favour; but when I analysed his features mentally, I could apparently see that the suave smile and gloved hand concealed a spirit that would dare and do anything to attain an object once wished for, and that the desire to appear well in the eyes of the world was only for the purpose of gaining converts and confidence.

At an early hour the next morning a very sharp and intelligent young man called at the hotel, and I accompanied him to the hot sulphur baths in the outskirts of the city, and had a plunge in them, as they were said to possess great medicinal qualities. After this we rode back to town, and my *cicerone* led me through the Tabernacle and out on its roof, whence I had a fine birdseye view of the city, Salt Lake, and the meadow-like plain extending as far as the vision could see. There are eighteen doors to the Tabernacle, and they are wide enough to allow an audience of

15,000 to reach the streets in two minutes. The great peculiarity of this building, excluding its enormous size, is that the roof is supported by the side walls alone, there being no supporting pillar from one end to the other. Seen from the inside of the roof the space between the outer and inner walls appears to be one intricate mass of wooden columns, which cross each other in every direction, so that a post on one side of the house acts as a support also on the other. Being designed and built by Mormons alone, they are very proud of their unique structure, and seldom fail to remind a gentile that his co-religionists can show nothing to compare with it. They are also proud of the grand organ, which is said to be the second largest on the continent, as it will, when finished, have 2,000 pipes and 50 stops. It is always covered with the national banner, to prove, it is said, that the Mormons are a loyal people. The space in front of it is divided into open compartments, which are reserved for the dignitaries of the church during services. These are occupied by the President, the President of the Stake, the Twelve Apostles, and the Bishopric, the former having the seat of honour, and also the softest, for while the others are content with hard boards, he enjoys the luxury of a sofa. Having scrambled over every available nook in the Tabernacle, I visited the Grand Temple, now in process of construction, and received full details of its character from the supervising architect. According to his statement it is to be a sublime architectural poem, which will typify the origin and beauties of the Mormon faith, and will therefore differ from any religious edifice throughout the world. As the explanation seemed to me to indicate eccentricity in form rather than originality or beauty, it might be safe to infer that eccentricity is also the characteristic of the creed. It is to be built of granite from cellar to dome, and is estimated to cost 1,000,000 dollars; but the same building elsewhere would probably cost double the sum, as many Mormons work on it for a mere nothing. The Endowment House, where converts are initiated into the mysteries of Mormonism, is expected to be spacious enough to allow a fine conservatory to be built, so that instead of depending upon a few scrubby pines and a painted screen to typify the fall of Eve in the garden of Eden, as they do at present, they will have a real garden with its flowers and trees.

Having exhausted the attractions of this place, I called on the historian, George A. Smith, and received from him a pamphlet, arranged in the form of a catechism, which contained a mass of information about the Mormons and their country. In reply to a query concerning the effect of the gentile invasion on the church, he stated that their presence had been rather pernicious, as they caused many young men to sigh for seeing the outer world of which they had heard so much. He said that this led them to look with disfavour upon polygamy, and that the girls were less opposed to it than they were. He thought that the truths of the faith would survive, even if polygamy were abolished, as they were founded upon the highest principles of natural laws. As Smith was undoubtedly honest in his belief, and apparently a sincere man in fulfilling the duties of life, I placed much confidence in his statements, especially when he had the candour to say that Mormonism under its present form would have to be isolated to flourish. I surmised from what he said that the leaders would soon find a region better suited to their tastes and the progress of the church than Utah, and that if pressed there they would soon make another Hegira, and thereby prove that they preferred their religion to any worldly comforts. As many of those who have risen to eminence in the church have all their property in the Territory, they would in all probability desert it if a new home were sought, and it would thereby lose its most potent organizers; hence the leaders will stay where they are for the present, and will move only when it seems that nothing else can preserve themselves or their faith from annihilation.

I met a Mormon lady after leaving Mr. Smith, and learned from her that the marriageable girls were bitterly opposed to polygamy, and preferred gentiles for husbands; "for," said she, "they treat them like women, not like beasts, as Mormons do." Were it not for the recruits obtained in Scotland, Wales, England, and Scandinavia, the church would soon sink into nonexistence, as many of the educated members of the rising generation are falling into infidelity, or apostatizing into the ranks of the gentile sinners. The most refined among the young girls look with horror upon a system which decrees that it is lawful for the brother to marry the sister, or any number of women belonging to the same family, and when either wishes for a divorce to be able to obtain it from the authorities of the church for 10 dollars. I have heard of a case in which the grandmother, mother, and daughter were married to the same man; of another in which three sisters were wives in the same house; and another in which an individual had married his own granddaughter, an aunt and her daughter of fourteen, and a grand-niece, while his first wife was so completely shelved that she never saw him. The number of wives that men have are supposed to represent their worldly power and respectability; but I learned from one individual that some men sought the female members of their harem more for their good looks or their usefulness in working than from any religious motives. One man who had six wives, wanted a seventh who was able to make dresses and hats, as none of those he possessed knew anything about these handicrafts, and another wanted a cook because his wives knew nothing of the culinary art.

Some of the leaders pretend that polygamy is ennobling, and is made a tenet of faith only because it was so ordained by revelation; yet any one who has heard its advocates attempt to uphold it by scriptural quotations must know how coarse their language and motives are.

An "apostate," in Mormon eyes, told me that this foul doctrine was invented by Joe Smith and Brigham Young for their own purpose, but that the latter was actually responsible for its being made an article of faith, in order that the church might be able to live from within after a time, and that converts need be sought only when convenient. According to his views, the priesthood have adopted Mormonism for the sole purpose of improving their worldly position, and this he attempted to prove by showing that all were either English or American by birth, and that none of them were characterized by goodness, justice, or even common pretentious piety. The most ignorant people were made bishops, but he deemed them nothing more than mere spies on the people.

The priesthood, it seems, is divided into a series of quorums. The first is the Presidency, which directs the affairs of the church; and the others are the Twelve Apostles, the High Council, the Seventies, the High Priests, Elders, Priests, Teachers, and Deacons. The Apostles constitute a travelling presiding council. The whole hierarchy is divided into two bodies, the Melchizedek and the Aaronic priesthood. To the former, which is the higher, belongs the offices of apostle, seventy, high priest, patriarch, and elder; the other includes the bishop, priest, teacher, and deacon. But the latter offices can be held only by those who are literally descendants of Aaron, and they are designated to the leading church authorities by revelation. Judging from the looks of some that I met, I should say that Aaron gave as a birthright to his descendants only two qualities,—namely, ignorance and an attachment to dirt and falsehood. It is their duty to harangue the lower orders, and to expound the teachings of the church. According to their theory there are so many gods, and eminent Mormons become gods in heaven, and rise one above another in power and glory to infinity. Joseph Smith, George A. Smith, and Brigham Young are the gods of the present period, and the only one above them is Jesus Christ, whose superior god and father is Adam. Above the latter is Jehovah, and above him is Elohim. All these have many wives, and each rules over his own descendants, who are constantly increasing in number and dominion. The glory of a Mormon when he becomes a god depends on the number of his wives and children, and polygamy is therefore inculcated, and wives are "sealed" to men on earth to augment their power in heaven. Some of the leading Mormons have 100 or more women "sealed" to them, it is said. The Mosaic commandments are the rule of life, but an addendum is made to them by a revelation of Joseph Smith's in 1833, and that specifies that wines and strong drinks, or hot drinks, and tobacco, should not be used, and that the flesh of animals should only be eaten during the winter, man's natural food being grains, roots, and fruits.

Infant baptism is condemned before the children are eight years of age; but living persons may be baptized for one or more persons who are dead, and this is supposed to be as efficacious in giving them a place in the Mormon Paradise as if they had been elected to the church when living. Many eminent men in the history of the world have been thus vicariously baptized, and they are expected to join the Mormons in the land above. Woman cannot be saved except by man, and those who do not marry can never enter heaven; hence there is no salvation for old maids, according to the Mormon doctrine. It will be seen that all this doctrine points to the enslavement of woman, and to the inculcation as a religious duty of polygamy upon the minds of all who would be apt to oppose its debasing characteristic. Young men who do not marry are socially tabooed, and girls are handed over to men at an early age, if they are applied for. The church leaders do not, it is said, think it beneath their dignity to suggest and aid in the disposal of maidens as soon as they arrive at pubescence. They are sedulously taught to avoid the company of gentiles, who are deemed to be the accursed of the earth. It is known that girls who have taken a fancy to non-Mormons have been followed by men dressed in women's clothes; and it is rumoured that more than one young gentile has paid his life as a forfeit for his gallantry.

The good that Mormonism has done is to give homes to many poor and ignorant Europeans, and to place them in a situation where their worldly position can be bettered, and their children educated. All who would note how the people struggled against poverty and the elements in early years, should visit the museum at Salt Lake City, and he will see there the coarse garments of horse-hair, dog's-hair, and undyed wool, which covered the person of many even as late as 1860; and the rude ploughs, harrows, and firearms they used. The Mormon idea of a fortified city, a collection of the plants and animals of the Territory, some old relics belonging to distinguished persons, and pottery made by the Southern Utah Indians in the misty past are to be seen, and also specimens of the mounds which these interesting people are supposed to have erected. The theatre, Camp Douglas, in the rear of the city, a Mormon school, and the tithing-house are also objects of interest, and no persons should leave without a bath in the hot sulphur springs, and a plunge in the great lake, on whose waters he can float with the greatest ease.

The tourist visiting Utah should by all means include the southern portion of the Territory in his rambles, if he desires to form a correct opinion of the Mormons, and learn the productiveness of the region which they, from desolate barrenness, have caused to yield rich stores of cereals and graminaceous verdure. In Salt Lake City, and the towns along the railroads, the influx of gentiles has caused a great modification in the Mormon character; hence one cannot infer from the people encountered on these highways the mental characteristics produced by a religion which justifies the deadly deeds of its own *phunsigars*, and knights, in ecclesiastical parlance, the brewers of the *aqua Tophania* so long as its poison saps only the vigour of those who would treat with contumely, or oppose, that church whose tenets they were sworn to maintain even at the risk of their life. Mormonism has been treated of in almost every conceivable manner, yet the greater portion of the writers have failed to note the mental characteristics of those professing it, and to mingle with all grades of the people, and thus study for themselves from nature alone instead of accepting second-hand assertions.

Being desirous of seeing the people of this odd faith in their natural condition, I expressed a desire to some prominent members of the church to visit the southern settlements, and they kindly offered to give me letters of introduction to Brigham Young, Jun., and the bishops of every town and village, so that I might be insured a welcome and be furnished with the facts I wished to learn. I was told that if I did not express contempt for the religion, polygamy and its professors, and such matters in general, I would get through there all right; "for the fact is," said my apostolic *cicerone*, "our people do not like to be spoken of disrespectfully, so I would advise you to keep your mouth shut." I informed him that I was not in Utah to reform saints; that I did not care if they had a million wives each; that it was none of my business, and I therefore did not think it incumbent upon myself to parade my opinions or try to teach them the error of their ways. "Very well, then," was the reply, "I think you can go through all right; yet you want letters from us to insure you good treatment." After this I reported to an official gentile, to seek his advice, and he urged me not to go among them unless I were willing to risk my life; as he thought that, in the condition of things there, the ignorant Mormons of the south would consider the "blood atonement" necessary to save me from the perdition sure to all who investigate the precepts and practices of the church.

On considering these two statements, I thought there might be some danger, but I concluded to go, nevertheless, though unnoticed and unannounced. So without waiting for letters to any one, I started on the train for Provo the next morning. Every soul aboard that train was a Mormon except myself, if I should judge from their expression, for these people have a physiognomy so peculiar that after a few days among them one knows them by intuition. The region traversed by this road is one mass of verdure, being irrigated by the numerous small streams that percolate the country in various directions. A canyon, filled with dense shrubbery and a few coniferous trees, yawns at intervals at the bases of the mountain ranges, and gives a wildness to the scene which contrasts quite agreeably with the pastoral landscape in front. The soil is naturally very fertile, that along the margin of Utah Lake being a true soil composed of vegetable mould; but near the mountains it is intermingled with granitoid boulders, though not to such an extent as to do much injury. Every vegetable product that can be raised in the Middle States can be grown there, and those portions not adapted to agriculture are well suited for the grazing of sheep and cattle. It has quite a mild climate, the sultry heat of summer being modified by the cool breezes from the snowy Wahsatch and Uintah Ranges, and the vapour-laden currents from the lakes. Though 4,500 feet above the level of the sea, the weather in winter is by no means as cold as might be anticipated, a circumstance due, no doubt, to the protection afforded by the mountains.

After a visit to the American Fork River and the picturesque scenery in its vicinity, I continued my way southward, and on the third day after my departure reached Provo, distant only fifty or sixty miles. This city occupies a good situation, as it is in the centre of a fine farming district near Utah Lake. It is sacred alone to the followers of Moroni, for not a gentile transacts business there. It is in charge of an ecclesiastical functionary appointed by the church, and he has bishops under him in each ward, whose duty it is to report the spiritual progress of the people, and their views on all matters pertaining to the discipline of the faith. Any grumbling at authority, any mental struggle against the tenets of the Prophet, any desire to conceal the annual income so as to avoid paying the just *pro rata* of the tithe, was carefully noted by these religious detectives, and the branded individuals were ever after closely watched, every verbal assertion being reported weekly to the occupant of the Lion House at Salt Lake City, who decided how the erring should be punished. These bishops, with the chief or mayor, act as a Board of Councilmen, and their word is accepted as decisive authority by their followers. No grumbling there at street assessments, pound or dog laws, for the moment the fiat is issued such matters are settled.

Having been recommended to a lady "who would board gentiles," I sought her residence, and was soon made at home by this estimable hostess, who prefers to remain a widow rather than espouse a Mormon attached to polygamy, and who has not become so obdurate against gentiles as to refuse them food and shelter, though ordered to do so in the most peremptory manner quite frequently by the Prophet and his ecclesiastical satellites. The boarding of gentiles is a deadly sin in the Mormon hagiography, and he or she who does it is liable to excommunication and a threat of everlasting punishment. It is said that a refusal to comply with this demand a few years ago would have brought the "Destroying Angels" to her door, with strict commands to send her spirit where it would not oppose the progress of the church on earth. Ensconced in this domicile, I was soon in a position to study Mormonism and it professors, and trying to reconcile myself to the assertion that the latter adopted the faith because they believed in it on biblical grounds. After a thorough and impartial investigation I was led to infer that the number who believe in it on Scriptural principles are the low and ignorant,—that the more intelligent are influenced solely by other motives; and, finally, that there are not a dozen women of intelligence in the whole community who favour polygamy.

I could relate many tales told me in confidence of the suffering and neglect of the first wives and their children, and the effect of that gnawing, sickening despair which devours the very soul of those who were foolish enough to adopt Mormonism when it was fired by the zeal of Smith and his coadjutors. The first wife of an apostle had not seen him inside her house for four years; the spouse of a good mechanic was often compelled to beg for a mouthful to eat for her children, because the husband could not support six wives; another took poison because her husband brought her sister of fourteen as a fifth wife; and a grandmother and granddaughter were married to the same man. These are some of the beauties of the church, and edifying they must be to persons of intelligence and refinement! From my experience in this city and elsewhere, I would deduce this general result—that to be a Mormon one must be either ignorant or a knave, and must appreciate worldly pleasures of the baser sorts more than the generous ethics, exalted sentiments, and cultured pleasure of the educated classes. The Mormons have many sophistries, glib answers, and physiological arguments to advance in defence of the foundation of their creed, yet the very coarseness with which they utter them proves their want of pure sentiment. The people are obedient to their ecclesiastical superiors; implicit believers, in many cases, in the doctrine of revelation; ready tools to do any work the leaders may require of them, no matter how dastardly or at what sacrifice to themselves; the majority are cautious, untruthful, and treacherous if they think they can by these means advance themselves or their church; inhospitable, opposed to gentiles of all grades, industrious, frugal, hard bargainers, and stern bigots. In their favour it may be said that they are comparatively free from certain vices characteristic of civilization, yet they are not by any means as exempt from drunkenness as they assume, nor are they imbued with that quality of "doing unto others as they would be done to" which they say their religion teaches, and they pretend to practise. How they may act towards each other I could not ascertain, yet I speak my candid and unbiassed opinion when I say that they cannot treat a gentile with justice, or even wish him well, if he is a competitor of theirs for wealth or land. The teachers, of course, mould their ignorant followers, and thus imbue them with the characteristics which distinguish them. It is a notorious fact that all the leaders are Americans and Englishmen, and that they have every reason to keep gentiles from out their midst, in order to retain the loaves and fishes for themselves. To accomplish this purpose they teach their bigoted adherents that the committal of a crime in defence of the church is no sin. They are taught to believe that the gentiles will be their servants on earth in the course of time, and in heaven after death; and that no unbelievers can enter this blessed abode except as slaves to the disciples of the American Mohammed. These lessons have produced their effect on the more ignorant, for they assume all the virtues in the calendar, concede none to others, and classify all outsiders as poor, craven, sinful spirits, whose souls can only be saved by the atonement of blood or the adoption of Mormonism.

After gaining all the information in this place that I could, I took the stage for St. George, the great southern stronghold of Mormonism, and its future Canaan. Ere departing I was told to keep my mouth closed about religion, not even to refer to it under any circumstances if mentioned to me, but if I could not escape, to pretend to be a "Jack Mormon," that is, one who does not oppose the peculiar doctrines of the Smithites. Being told where I could stop without being subject to the *surveillance* of the authorities of the town, I moved southward. I had for a companion in the stage a bishop, who wore a rusty suit of black, an extremely soiled shirt and a paper collar, a hat apparently of the time of the Flood, being a home-made product, and an expression as beaming (!) as the "dominie" indigenous to *Punch*. For twenty or thirty miles out we passed through a finely-cultivated country, but in a short time after began to enter the broken, trappean regions so characteristic of Southern Utah. After several inquiries, I learned from my *vis-à-vis* that the southern portion of the Territory was only fit to be the abode of Mormons, as they could live where a hedgehog could; that it possessed neither a genial climate nor a good soil; that all things raised there had to be petted and nursed into life; and, finally, that it was a mere range of whitened sand, which produced nought in the state of nature but the mezquite and

Spanish bayonet, or yuca. At the end of two days I learned that my informant was correct on some points, yet all the bad qualities the region was said to possess did not present themselves to me. This section is allied to Northern Arizona in its productions and climate, and to those who have never heard the peculiarities of the country I may illustrate it by a mining legend. One of the seekers after gold along the Colorado died suddenly, and, as a matter of course, owing to his lack of moral education, was sent to the plutonian regions. When there about a month, he sent a letter to his comrade, requesting him as a favour to send his blankets, for though having the hottest corner, still he was freezing. In a postscript he advised all Arizonians who did not wish to suffer from cold after death to keep away from his abode.

This portion is, however, so well adapted to the production of grapes that it will ere long be one of the great wine districts of the continent. Semi-tropical fruits thrive luxuriantly, and cotton has been grown in a few places; but the experiments with the latter have not been general enough to test its success. Silk culture promises to become a prominent industry, as the climate is genial, and trees fit for the food of the Japanese worm grow well. The efforts thus far have proved successful. The area fit for general cultivation is very limited; 200 square miles is probably all that can be found around St. George, Washington, and the Santa Clara Valley suitable for the production of any staple. The entire country should, however, be wealthy in the useful minerals, and the development of these may atone for the want of agricultural facilities. St. George, the chief city of Southern Utah, has about 3,000 inhabitants, a fine tabernacle, good school-houses, and a general air of comfort. The mellow tones of the herdsman's horn awake the traveller early in the morn, as it summons the owners of cattle to bring them out, and its cheerful sound mingles with the lowing of the herd as they are driven home each evening. Here can be found the Simon Pure Mormons, with all their hopes, traditions, and prejudices; but I think the preceding opinion will apply to all as a religious body. This is the spot said to be the next objective point of the Mormon leaders when they wish to seek isolation for their flocks. It will answer the purpose very well, as no gentile would care to live there, for the toil required to make it productive is too severe; but under Mormon patience, perseverance, and unceasing industry, it may become as fertile as the Salt Lake Basin. The city is a strong fortress, capable of resisting any attack of the Indians, and on this account it will prove a useful halting-spot to the pilgrims. Mormonism must be isolated to live as a faith, and this is well known to its prophets and priests, hence they are looking out for a spot where they will be let alone, where no accursed gentile will follow them; hence it is strongly intimated that the southern section, with its deserts and mountains, will be the objective point of the next Hegira, and that this Hegira may occur long before any believer can even predict it.

During my rambles in the southern section I met one intelligent Mormon woman who was a devoted adherent to the faith, and when I told her that I had met President Young she could scarcely believe it, as she supposed him to be a deity who was visible only to a few of the chosen people; but when I described his looks and manners she yielded my statement some credence, then suddenly burst forth with the fervid ejaculation, "Oh, Heaven! grant me the privilege of once gazing on Thy holy Prophet, and I shall die in happiness!" I found the southern Mormons much more bigoted than those who had come in contact with newspapers and gentiles, and nothing could make them believe otherwise than that President Young was enveloped by a continual halo of yellow-rayed glory, and that his face beamed with the radiance of a god. I also learned that every one sacredly preserved the endowment garment worn during the ceremony of initiation into the church, and that many believed that no injury could happen to their person while they wore it, nor to their house while it was kept there; it was even supposed to be bullet-proof, although composed of no stronger material than a piece of cotton. This endowment, I gleaned from statements, was nothing more than anointing their skin, wearing a long cotton gown for a short time during a procession, and witnessing a coarse theatrical representation of the fall of Eve in the garden, in which Brigham Young acted as the Lord, somebody else as the Prince of Evil, and Eliza Snow, the poetess, as Eve, while Adam was represented by an apostle. The members were then sworn to fealty to the faith and their spiritual leaders, and after having a small gash cut in the leg above the knee, so that they might be readily recognized as true believers everywhere, were dismissed with a benediction. I am not positive whether I understood this portion of the ceremony properly or not, as I made no notes at the time, but this statement is as near as I can remember it.

Returning northward by slow stages, I reached Ogden once more, thence took the train on the Union Pacific Railroad for the east. I met a Mormon bishop from Southern Idaho aboard, and he, without any introduction, opened conversation when he saw me noting down the looks of the country through which we were passing. He called my attention to the industry of the people, their comfortable homes, happy families, and the irrigating canals that coursed through the sage brush in every direction. From this the conversation turned to their faith, and I found he was a thorough believer in the efficacy of the "blood atonement" —that is, in reality, the destruction of persons who would betray the interests of the church—as he thought their death would be of less consequence than any assaults on divine truths. He had the Scriptures by heart evidently, for he hurled quotation after quotation at my head with a volubility that no orthodox minister could. As he believed in everything taught by the church, and considered that heavenly gods are in the form of men, and are the fathers of the souls of men in this world, I was glad when the train conductor called my attention to the rugged wildness of the Devil's Gate in the Weber Canyon, as it gave me an opportunity of leaving him. This gate is a mere passage through a granitic precipice about 800 feet high, and through it the Weber River dashes in a turbid and turbulent mass of tawny wavelets. Passing beyond this, the train entered the Weber Valley, a sage-clad plain, which is rapidly becoming a fertile garden under the irrigating process of the Mormons; and leaving this behind, rattled into another rock-bound chasm which boasts two remarkable petral formations, known respectively as the Devil's Slide and the Witch's Rocks. The former is composed of two low walls of granite, apparently about 20 feet apart, which follow the slope of the hill from summit to base, and the other is a mere aggregation of eccentric crags.

The next object of interest encountered was a lonely pine, called the One Thousand Mile Tree, which grew beside the track, and beyond this came a narrow chasm whose walls towered upward to a height ranging from 400 to 1,000 feet. The crags were arranged in all forms, and rose into cones, domes, needles, peaks, caps, cavities, and every other shape into which erosion could fashion them. They also bore many hues, and were of varied characters, some being red conglomerates, and others pale grey limestones, bluish-white granites, or vari-coloured sedimentary stratifications. Among its best-known crags are Castle Rock, which bears a remote resemblance to a dismantled fortress; Pulpit Rock, a towering mass from which it is said—though it is very improbable—that Brigham Young addressed his followers when he first entered Utah; Sentinel Rock, which is 250 feet high; Hanging Rock, one of those peculiar balanced crags so abundant in the West; Tower Rock and the Devil's Teapot, so-called from their form and size; and Steamboat Rocks, which have a height of 1,500 and a length of 2,800 feet. The size, shapes, and colours of the remarkable rocks to be seen are too numerous to mention, especially as they extend for miles in broken, towering masses. The most interesting gorge in the Territory is Echo Canyon, which is four miles long, and whose sides average from 500 to 1,500 feet in altitude. This is the spot selected by the Mormons to meet General Johnston's army, which was sent against them by President Buchanan, and their rocky fortifications are still visible in some places on the summit. Few persons take their eyes off the scenery while running through this chasm, for it is as unique as it is interesting. After passing it the train glided over a region possessing little interest for the lover of scenery, and perhaps less for the agriculturist, as the land looked to be rather poor, houses were scarce, and few herds of horses or horned cattle were to be seen. Trees were only visible occasionally along the margins of streams, and the hills were bare in many places of even the semblance of the economic fir and pine. The country was so dreary to me that I fell into a sound sleep, and did not awake until I reached Evanston, in Wyoming Territory, and there I left the train to ramble over the new land in quest of facts and adventures.

CHAPTER XVII.

RAMBLES IN WYOMING.

Area, population, topography, and climate of the Territory—The different grades of soil—Its grazing facilities—Pugnacious character of the grasses—Its mineral wealth—Schools—The political rights of women—Character of the scenery—A vast animal cemetery—Evanston—The Church Buttes—Striking scenery and wonderful formations of the Green River region—Hayden's Cathedral—Painted mountains—Remarkable clearness of the atmosphere—Anecdote of an English tourist—An alarm of Indians and a night vigil.

THE Territory of Wyoming lies between the parallels of 41° and 45° north latitude, and 104° and 111° west longitude, forming nearly a perfect quadrangle. It has a maximum length from east to west of 350 miles, a width of 275 miles, and a total area of 97,883 square miles. It is bounded on the north by Montana, on the south by Utah and Colorado, on the east by Dakota and Nebraska, and on the west by Utah, Idaho, and Montana. It is divided into seven counties, namely, Albany, Carbon, Crook, Laramie, Pease, Sweetwater, and Uintah. Its chief towns, which are all small, are Cheyenne, the capital, in Laramie County; Laramie City and Sherman, in Albany County; Rawlins and Carbon, in Carbon County; South Pass City, Rock Springs, Green River City, and Atlantic City, in Sweetwater County; and Evanston, in Uintah County. All these, except South Pass and Atlantic City, are on the line of the Union Pacific Railroad, which runs through the Territory from east to west. New hamlets are springing up constantly, and where there is nothing but a desert of wild sage one day there may be a prosperous town the next; for wherever a valuable mine is discovered a village is sure to be one of its adjuncts in a few weeks. The present population of the Territory is about 28,000, of which the greater number is confined to towns and minor settlements. Its inhabitants are largely made up of foreigners, of which the Irish and Germans form the most conspicuous portion. The majority of the inhabitants are engaged in trading, mining, or in personal service on the railway, the number occupied in agricultural pursuits being unusually small, perhaps not more than 500, but many are engaged in stock-raising and sheep husbandry.

The surface of the country is high and rolling, its mean elevation above the level of the sea being 6,450 feet. It is divided into two unequal parts by the main chain of the Rocky Mountains, which extends across it in a south-east and north-west direction, entering it on the east from Colorado. By far the larger portion of the Territory lies north-east of the divide. Besides this towering range, it is also traversed in various directions by groups of mountains, the most important of which are the Wind River Mountains in the north-west, the Bighorn Mountains north of the centre, the Black Hills in the north-east part, the Laramie Mountains south-west of these, and farther to the south the Medicine Bow Range, on the Colorado border, the Bishop Mountains, west of the main chain, and the Rattlesnake Hills and Sweetwater Mountains in the central portion. The loftiest pinnacle in the Territory is Fremont's Peak, in the Wind River Mountains, which has an altitude of 13,570 feet, and next to this comes Gilbert Peak, 13,250 feet high.

The country is drained in the south-west part by the Green River, the chief affluent of the Colorado of the West; in the north by the Snake River and its tributaries; in the north-east by the Little Missouri; and south of this are the Cheyenne, North Platte, and Chugwater Rivers, and Rawhide Creek. The Wind, Tongue, and Powder Rivers flow in order from the west, and pursuing a northerly course join the Yellowstone in Montana. None of these are navigable for steamboats, and some are very low in summer and autumn, so that they do not possess water enough to irrigate a large area of country.

The climate of the Territory varies with its altitudes, it being severe on the higher plateaus and comparatively mild in the sheltered valleys. The mean annual temperature at Cheyenne, in latitude 41° 12′, was, in 1874, placed at 44° 2′, and the rainfall at 14·155 inches. The mean temperature for August, the hottest month, was found to be 65° 1′, and for January, the coldest month, 26° 6′; yet this place has an elevation of 5,931 feet. The air is pure and bracing, and so clear that objects twenty miles away do not seem to be half that distance. It is said by those who have lived some time in the country that the cold of winter is not felt so severely there as it is in the Atlantic States, especially in those near the sea, owing to the dryness of the atmosphere, and the sunny days which prevail, except when it is snowing. I found it cold enough in October, however, to gladly welcome the heat of the stove in the train, and to require the warmth of an overcoat besides. Severe wind-storms blow over the open, treeless plains quite often, even in autumn, and, in contradistinction to Western Oregon and Washington Territory, thunder-storms are very common, especially in the higher latitudes; and the lightning I saw there was the most vivid, persistent, and sulphurous in glare that I ever beheld. The sky seemed to be one vast canopy of greenish-yellow light of impenetrable thickness, and innumerable streaks or lines of white flashes, while the earth and air and mountains seemed to tremble with the deep roar of the thunder. It was a magnificent sight, but one that would not be often gladly welcomed.

The soil of the Territory may be divided into three grades, namely, that which is arable, that which is barren or covered with artemisia, and that which yields grass fit for the support of cattle. The former is found principally near streams, springs, lakes, and at the bases of mountains, and is limited in extent; the second is more extensive than is desired; and the third is confined to the open plains and foothills. The country is much better adapted to grazing than to agriculture, owing to the small quantity of the rainfall, the paucity of large rivers that would enable irrigation to be carried out on an extensive scale, and the high elevation of the land. Where the soil has been irrigated, or has possessed moisture enough in itself to sustain crops, cereals, vegetables, and roots have yielded generously, and the pomona has been characterized as being large and finely flavoured. So few persons have turned their attention to agriculture, however, that no estimate can really be formed of the value of the soil for the production of grain and other commodities; but the inference may readily be made that it is the equal of that of Utah in fertility, and, if irrigated in the same manner, would yield as abundantly.

Of its grazing facilities, however, there can be no doubt, the large plains being covered with the buffalo grass, which retains its nutritive qualities persistently, as it dries on the stalk, so furnishes pabulum for cattle at all seasons. This is the most combative plant that I know of, for it will not only retain its own ground against all comers, but will actually destroy or expel any interloping shrub that might endanger its abundance of food. This pugnacity results in the expulsion of even economic flowers, so that a buffalo grass plain is almost as sober in colours as a Quaker's dress. A few puny species of the flora may raise their heads in some places, but they are so stunted in size and brilliancy of hue by their avaricious neighbour, that they do little to brighten the landscape. A grazier told me that sheep, cows, and horses fed on this grass arrived at maturity six months or a year earlier than they did east of the Rocky Mountains; that they were more prolific, had a better fleece and hide, and that their flesh was more tender and palatable. He owned 8,000 head of cattle, and large numbers of sheep, and as he paid nothing for their pasturage, he was rapidly improving in worldly welfare; yet he commenced with only twenty cows, which were given him to herd on shares. The country would afford pasturage for millions of cattle, as any portion of it, except the worst sage plains, is superior to the Tyrol in its abundance of the *graminæ*. Its probable future is to become a vast grazing range, whence meat, hides, and wool may be shipped all over the continent. It has not many facilities for manufacturing purposes, owing to the paucity of timber on the plains; and even on some of the mountains it is not very abundant, nor easily accessible.

The mineral wealth of the Territory is little known, owing to the sparseness of population. Gold diggings are worked in the Sweetwater district along gulches, and auriferous quartz veins are now receiving some attention. The total yield of gold does not average, perhaps, more than 150,000 dollars per annum, though this amount promises to be largely increased ere long, as veins of gold and silver have recently been discovered in the hills to the north-west of Cheyenne. Iron ore, pure red hematite, copper ore, plumbago, and petroleum have been found in several places; and coal is supposed to underlie an extensive area, as it has been traced in regions far apart. Coal mining is now carried on near Evanston, Carbon, and Rock Springs, the annual yield being estimated at over 300,000 tons. It is principally lignite, and is used for fuel and for the production of gas and steam. Two lakes containing enormous quantities of soda have been found within sixty-five miles of Rawlins, a railway station, and they are said to be the richest in the world in this mineral, as the largest covers an area of 200 acres, and the smaller three and a half acres. As the distant mountain ranges have been explored only to a very limited extent, it is supposed, judging from their geological formation, that they are rich in both precious and useful metals.

Notwithstanding its sparse population, Wyoming is devoting much attention to its educational institutions, and its public schools are free to all between the ages of seven and twenty-one. It had, in 1875, about fourteen schools, which were attended by nearly 1,300 children, and their maintenance cost 16,000 dollars per annum in wages alone. It also boasts of libraries, churches, and newspapers, and has the unique honour of being the only country in the world which has conferred political privileges on women. The gentle sex may vote there on all Territorial political questions as well as the men, and they may run for any elective political office lower than that of Governor. They have already done duty on juries, and have been elected as magistrates and superintendents of schools.

This is rapid progress for a Territory that was first settled in 1867, and had a population of less than 9,000 whites eight years ago, of which more than one-third was foreign born. Its Indian population now almost equals the whites, it being estimated at 24,000; but as the larger portion is confined to reservations, the more sanguinary would-be heroes are unable to disturb the quietude of the towns.

The scenery of the country is exceedingly grand, and in many parts very strange, such as that to be found in the Yellowstone Park, along the course of the Green River, and in the Wind River Mountains. It might also be denominated a vast animal cemetery, as the remains of millions of extinct horses, camels, elephants, mastodons, oreodons, gigantic turtles, enormous reptiles, and numerous fishes have been found embedded in its sedimentary formations; while the imprints of southern palms, flowers and ferns found on shales, prove that the region once possessed a tropical climate, and that the umbrageous foliage of tree-like ferns afforded shade to many quadrupeds that have long since ceased to exist on this planet.

As few persons are induced to leave the comfort of railway travelling for the disagreeable jolting of a stage, or the bucking of a mustang, to go in search of the wonderful or the sublime in a country but thinly settled, only those scenes found along the railroad possess much interest for many tourists.

Evanston, the first town at which I halted, had a population of 1,500, several churches, two schools, and one newspaper. It is indebted for its existence to the large coal-mines which are worked in its vicinity, and to the number of railway *employés* who make it their home, as it is the headquarters of one division of the road. It promises to become a flourishing town if all the enterprises inaugurated by its sanguine inhabitants are carried out during the life of the present generation. These are to embrace rolling mills, and the building of a railroad into the Bear River Valley, in Idaho, whence they can procure an abundance of pabulum, for the region surrounding their town is too dry and barren to produce useful crops of any sort, so they are compelled to import food of all kinds from Utah, except meat and fish, these being easily procurable at their own doors. The Bear River, which passes through the town, is stocked with splendid trout and mullet, which furnish excellent fishing; and the antelope, deer, elk, grouse, and other game are found on the plains, while the bear may be stalked on the mountains. Several of the latter family were chained in the streets, and were surrounded by groups of children, who both amused and annoyed them by furnishing them an abundance of sweets, and then sending dogs to snap at them while engaged in munching the toothsome edibles. The growling, barking, and hair-flying that followed the latter movement gave the juveniles, and even bearded males, a cause for loud laughter.

On leaving this place I chose to ride in the caboose of the slower trains, as that gave me a better opportunity of seeing the country, for the passenger trains flit by so rapidly that one can get only a momentary glance at even the most interesting objects, unless he knows in advance when he is approaching them, and that is an impossibility for a stranger. The accommodation train is also more comfortable, as it contains few passengers, and a person can therefore enjoy a luxurious stretch on the long seats, or sit cosily by the fire if the weather is chilly; but above all these even is another and a very important matter, namely, that the conductor calls one's attention to the remarkable scenery, and that pioneers who live in the country are frequently met with, and their stories of bear hunts, Indian fights, and struggles against poverty, often pleasantly while away the hours required to pass over several miles of dreary landscape.

The first striking object to attract the attention after leaving Evanston is Table Rock, which is about a mile in length, and after that come a series of hillocks known as Church Buttes, which have an elevation of 6,731 feet. They consist of sedimentary sandstones and marly stratifications, arranged in the form of temples, ampitheatres, domes, colosseums, obelisks, pilasters, and Gothic churches, with their flutings, vestibules, roofs, and such other appendages as belong to them. Their bright colours are exceedingly vivid, and are as regular as if painted by man. They are unusually interesting from their innumerable forms and brilliant hues, but they are rendered more so by the fact that they contain the remains of such extinct American mammals as the early rhinoceros, mastodon, oreodon, and tithanotherum, besides many birds and reptiles, and extraordinary numbers of rattlesnakes. Between these and Green River Station the country is an alkaline plain, covered only with sage, purshia, linosyris, and other useless plants. The station, or rather city, is a hamlet of 400 inhabitants, which seems to be dedicated solely to restaurants, saloons, and petty hotels, for the moment the train glides in bells seem to send their brazen clangor from every house.

Runners waylay the passengers and invite them to their eating houses on the plea that dinner only costs 50 cents, and plethoric Teutons, with curved pipe in mouth, begin shouting in their native language for the patronage of any of their countrymen that may be aboard. The din of bells and the yelling of runners continues as long as a passenger is seen in the streets, but when the last one disappears they all cease at once.

The river which flows by the town has received its name from its colour, its water being in some places of the purest emerald hue, whilst its shores and bars, which are glistening white, are encased in perpendicular bluffs, from 200 to 1,500 feet in height, that are painted with bright red and yellow colours by that greatest of painters—Nature.

The station is famous for the shales and beautiful sandstones which surround it, and the huge terraces that loom up two miles in the rear to a height of many feet, and send forth spires, turrets, domes, and other outlines in countless numbers. The cliffs are arranged in verticular layers varying in thickness from that of a knife to that of several feet. The Giant's Butte and the Giant's Club seen here are massive cliffs that tower upward to a height of several feet, and are streaked with bright colours. The sedimentary stratifications contain the fossils of extinct plants, insects, and fresh-water fishes; and specimens of these were sold by an individual dressed in buckskin, who was called "Old Mortification" by his neighbours. He could discourse glibly on the strange geology and palæontology of the region, having gained his information from the Government scientists who explored the country, and for whom he acted as guide. A conversation of ten minutes with him would give a person a better knowledge of the wonders of the Territory than a written volume, as he had them all by heart, and rolled them out in an uninterrupted flow of words, like a schoolboy repeating a lesson committed to memory.

Not far from this place, near Bryan, is a peak called Hayden's Cathedral, which resembles a Gothic church; and some distance from that are several tarns, the most interesting being Carter's Lake, which has an area of about 50 acres, and is 10,321 feet above the level of the sea. Several charming lakes are scattered throughout the mountains, but as they are reached only by trails they are little frequented by casual tourists. Some are embedded in rocky pinnacles and surrounded by snow; others are deeply embowered amidst tall spruces or gloomy pines; and others still form circular basins, clear as crystal and cold as ice, in mountain vales, which are seldom visited by aught save wild animals or wilder red men.

One of the scenes in the vicinity of Green River Station that is worthy the attention of even the most unsentimental traveller is the Red Canyon, which furrows the mountains hundreds of feet in depth, and glares boldly in its robes of almost crimson red. Strange and wonderful in its forms and colours, chasms and towers, is this vast cemetery, which reveals to the scientific eye the once-fabled monsters that inhabited the earth in the misty past, and were equally at home in the water, on the land, and in the air.

That which appeals most readily to the mind of the ordinary tourist is, however, the lofty mountains of sedimentary sandstones, with their many loud hues, varying from pale blue to brown, black, orange, and red, which loom up in the landscape in many places, and cast their bright shadows far over the ground that surrounds them. The clearness of the atmosphere is also a remarkable phenomenon, and one which is rather startling at first, for points two miles distant do not seem more than a few yards, and those forty miles not more than ten.

As a specimen of how deceptive distances are there, a story is told of an English tourist who expressed a wish one morning to some native acquaintances to take a walk to a mountain, apparently a short distance away, before breakfast. They looked at him at first in smiling astonishment, but seeing material for a joke in the matter, they readily complied with his wishes, and started off at a brisk gait. They walked on and on for miles, but the mountain seemed as distant as ever. They finally came to a small stream, and when they reached its banks, the tourist commenced undressing.

"What in mercy's name are you doing?" said one of the party.

"Why, I'm undressing to cross this broad river," said he.

"Why, this is only a creek," said another.

"Well, how am I to know that?" said the disgusted tourist, "for no one can tell the depths and distances in this—we will say queer—country."

The joke having been carried to a climax, his escort told him that the mountain he wished to reach before breakfast was nearly fifty miles distant, and being steep and rugged, would require nearly two days' hard marching to reach the summit; so he returned to the hotel, weary and a little crestfallen, where he was received with greetings of good-natured raillery by those who saw him start off so blithely in the morning.

To the east and west of Green River Station are several large peaks or isolated high hills, called buttes, and the most important are designated generally by their colour, so that one hears continually of the Black, Red, Green, Blue, and Yellow Buttes, for their hues change in different parts of the country. These painted mountains are so common that one scarcely notices them after awhile, unless they possess some extraordinary attractions or peculiarities. Even the rocky columns worn into innumerable forms by disintegration, exfoliation, or whatever other processes are required to work them into shape, receive little attention if they are not of gigantic proportions, vividly coloured, and exceedingly erratic in their groupings of outlines. The wonderful in nature is so general there that people forget it in a short time, or look upon it with no higher sense of admiration or keener feeling of pleasure than they would upon a greasewood plain.

A few miles from the station the conductor called my attention to a place called Carmichael's Cut, after the man who superintended its preparation for the railway track, as a spot well worth noting, it being the only place in the country where rocks could be found that would burn like coal. If one heard that the mountains out there would blaze up by touching them with a match, he would not readily doubt it at first, after seeing some of the many strange phenomena of the region; hence I was not surprised when the conductor wished to show me how a solid stone would burn in the stove. As there were a few labouring men in its vicinity who kept a fire going, one of them, at the suggestion of the conductor, placed a large piece of stone on it, and it was there scarcely a minute before it began to burn with a brilliant flame and great heat. An examination of the rock proved it to be a shale so impregnated with petroleum as to seem little more than a solidified cake of oil. This cut is 3,000 feet long and from 5 to 20 feet in height, and yields an average of 100 gallons of oil to a ton of rock. Some enterprising men were talking of erecting a mill there, and crushing the rock for the sake of the oil, a speculation which would seem to promise success. Fifty-one miles from Green River are the towering Black Buttes, a series of elevated, rounded hills covered with the Western juniper, which casts a dark shadow far over the ground, and thus gives the name to the landmark. This was the first timber of any importance I saw in the Territory, nor did any other present itself until we came in sight of the Black Hills, on the Laramie Plains, except the few alders, willows, and cottonwoods that always skirt the borders of streams.

Towards evening of the same day we reached Creston, a small hamlet which receives its name from its position on the summit of the Rocky Mountains; for two miles west of it the waters begin to divide in their course, some flowing towards the Atlantic and others towards the Pacific coast. At midnight we were approaching Fort Steele, a small hamlet of 500 inhabitants, when we were suddenly aroused by the alarmed cry of the conductor, who shouted, "Get out your rifles; the Sioux are coming!" The engine also gave a wild scream of fear, and the train was brought to such an abrupt stop that the few passengers in the caboose were hurled in every direction. After a momentary stoppage, it commenced to retreat at a most unusually rapid pace, for fear the Indians might attempt to board it; but after receding a distance of perhaps three miles, it came to a halt.

During all this time the few male passengers aboard were out on the platforms with rifle or revolver in hand, ready to repel any attempt at boarding, while three or four women inside stood mute with fear or heroic resolve. We could hear the reports of rifles as we sped backward, and knew by their faint crackling and the source from which the noise came that the small garrison, always kept there, had chased the treacherous foes away, and was then rapidly pursuing them. After a fair interval of time the train moved forward once more, and entered the station at half-past one o'clock.

The little village looked placid enough in the moonlight, and the steely waters of the North Platte murmured onward as if nothing had occurred; but below the railway buildings, on the main street, armed men were moving briskly about, and pale-faced women stood in the doorways, or poked their heads out of windows and made inquiries about the fate of the enemy. A drinking saloon, which had been opened during the excitement, was crowded with sturdy men, armed *cap-à-pie* with rifles and revolvers, who were doing full justice to the liquids, and vowing vengeance on the rascally redskins. Any Sioux caught in this town are summarily dealt with, as they are the most sanguinary tribe in the Territory, and the cause of all the annoyance which the place has suffered from raids; and even the currish-looking Utes do not receive a pleasant welcome if they loiter in its streets after dusk, for if they do no other harm, they steal everything they can lay hands on.

The train waited in the station until telegrams were received from several hamlets along the railway line, announcing that no Indians were known to be in the vicinity, and then moved eastward at a good rate of speed, to be certain that it could be captured by no sudden assault, for the red men are rather partial to attacking goods trains, knowing that they are sure of a large share of plunder if they capture them, and run little risk of meeting a determined resistance from the few *employés* and passengers which they usually carry.

To be sure that no impediments were laid on the track, sentinels were posted on the roof of the cars with orders to keep a sharp look-out, and two passengers who carried powerful field glasses were placed in the engine cubby, the remainder being stationed in such a position that their rifles could open at once on the foe. The train rattled on uninterruptedly throughout the long hours of the night, not an incident occurring to break the monotony of the weary vigil, when suddenly, just before dawn, when the moon was hidden behind a mass of dark clouds, a cry from one of the sentinels on top sent a thrill of alarmed expectation coursing through every person's veins. On demanding what the matter was, he called attention to a large, dark column scouring down the plains a short distance ahead of us. Looking at this through a glass we found it to be a large body of mustangs that were careering at full speed; but we could see no men.

"There are no Indians with them," said a pioneer, "else they would not keep such a straight course; but they have undoubtedly been chased by them, or they are a band that has broken away from a captured herd."

In reply to a question of how he knew that, he replied that horses were always asleep at that hour in the morning unless they were startled by some unusual cause, and as Indians never commenced a raid so early in the day, he had no doubt but that the horses were runaways. This was assuring, but to be doubly sure, the train increased its pace, and every one, except the engineer and fireman, took a station on the platforms or extended himself flat on the roofs of the cars with rifle or revolver ready for instant use. The herd came on so regularly that we were becoming almost certain that they were ridden by Indians, and were accordingly preparing to open fire, when they halted suddenly a few yards away, and after gazing at the glaring light for a few moments, wheeled about, and when the engine screamed, dashed away at their best pace, kicking, splurging, and neighing with fright.

After this incident the pioneer was accepted both as an authority and a prophet on Indian customs, and so long as he was aboard we felt sure that no red men could attack us unawares.

CHAPTER XVIII.

EASTWARD SKETCHES.

The Laramie Plains—Best stock for the plains—The Wind River country—Strange phenomenon of Buffalo Bull Lake—Weird mountain tarns—An inglorious retreat—Laramie City—Game of the country—The Maiden's Slide—Sherman—Peculiar sensation produced by thunder—Grandeur of a mountain storm—Aspect of the country toward the east—Arrival at Cheyenne—The murderous history of its early days—What constituted a gentleman in Cheyenne—Women as magistrates and members of juries—Anecdotes of their sense of justice—Character of Cheyenne and surrounding country—Retrospective glance of a tour of North-western America.

AT an early hour in the morning the train entered the extensive Laramie Plains, one of the finest grazing regions in the Territory. These were dotted in every direction with immense herds of horned cattle, horses, and antelopes, which looked like large coppices in the distance, while hundreds or prairie dogs scampered about near their villages, or stood erect on their hind legs and chattered at the iron steed, or plunged headlong into their subterranean domiciles.

The Laramie Plains extend from the Black Hills to the Medicine Bow Range, an estimated width of seventy miles, their length being placed at ninety or a hundred miles. Their total area is stated to be 7,000 square miles, and their elevation above the level of the sea 7,000 feet. Their surface varies in character and altitude, some portions being beautiful meadows and others rolling and hilly. They are covered with the short, succulent buffalo grass, which furnishes pabulum to animals the year round.

Great as may be the number of cattle that now roam over them, they could support many times that number; and as they are, I believe, open to all persons for grazing purposes, they offer an excellent opportunity for enterprising men to engage in a profitable business. All the expense attending stock-raising, according to the statement of a prominent grazier, is the capital invested in cattle and a herdsman to look after them. He, and others also deemed to be impartial judges, stated that a man might treble his stock there in two years, as the cows are very prolific. The horned cattle that thrive best are a cross between the Texan and some blooded variety, as the former imparts the activity necessary to enable them to search for food, while the latter gives flesh and weight. The Black Hills also afford an excellent pasturage, and some good sites for farms, as they contain a large proportion of arable land, are well wooded with fir and pine—from which they receive their name—and a greater quantity of rain falls upon them than upon the surrounding plains. Their spurs jut far out into Dakota, and their peaks rise to an altitude of 7,000 feet. They have a length of about 100 miles, and an average width, from base to base, of perhaps fifty miles. They are thronged with game, and precious metals have been found in several of their streams and gulches, and gold-bearing quartz on the slopes. They have always been a favourite camping-ground with wandering Indians, owing to the abundance of grass, game, shelter, and water. The majority of the streams have their origin in a granitic formation, so that they never run dry; but those having their birth in an igneous region become parched up in summer. They contain no permanent settlers at present, as the Indians have not yet relinquished their claim to them, and they would be apt to take the scalp and goods of any one bold enough to settle there alone.

Another splendid grazing country which is also largely barred against the whites is that adjacent to the Wind River Mountains, about 100 miles distant from the Laramie Plains. This is a magical region also, it being replete with thermal springs of many varieties, small tarns of soda, magnesia, and other minerals, and splendid lakes; and it is seamed by deep chasms, several of which are known to contain gold and silver; and its snowy peaks are the loftiest in the Territory. One of the most interesting lakes on the continent is situated high up in these mountains. This is called Buffalo Bull Lake, from the fact that it gives forth a loud noise that has been appropriately compared to the simultaneous bellowing of hundreds of angry bisons. It can be heard half a mile on a fine day, and its deep, sullen, and solemn roar sounds strange and weird amidst the mountain solitudes. When one hears it the first time he is seized with a feeling of awe, but this is soon banished when he detects its cause.

This is simple enough. The depth of the water and the closeness with which it is encircled by walls make a funnel into which the rarefied atmosphere of the mountain rushes with great impetuosity. The pressure from above causes the denser air below to circulate rapidly in order to obtain a means of escape, but being unable to find it, and being resisted in its motion by the steep, hard bluffs, and the yielding, elastic fluid which is lashed into vigorous action, it produces the hoarse, rough roar which is so startling to travellers at first. The difference between the atmosphere above and at the surface of the lake is made evident immediately by clambering down the towering cliffs. Above, it is quite rarefied, but below it is so dense as to become oppressive in a short time; hence one does not care to tarry there long. The water has a deep blue hue, but where the rays of the sun strike it the wavelets seemingly change to a purplish tinge, especially in early morning. Its only accessories are a few pines and firs, which are so exposed to the rude breezes of the mountains that they are rather dwarfed in size and have a meagre foliage. Their soughing tones, the roaring of the lake, the silence that reigns all around elsewhere, and the wild landscape make a scene that is both weird and grandly majestic. Not far from this are several tarns, which are imbedded in the folds of mountains that tower above them to an altitude of from 8,000 to 12,000 feet; and each is characterized by some special individuality, such as cavernous depths, bubbling waters that look as if they were in a state of ebullition, or a moaning cadence, as if they were haunted by the wailing spirits of the dead, or by sorrowing sprites.

I ventured into that country with a party of miners going on a prospecting tour, who were under the command of an experienced guide and scout; but we left it in such a hurry that we forgot some horses, and all our food and camp equipage. The cause of our sudden and inglorious retreat was the leaden protests of a large party of Sioux, who "bounced" us suddenly one afternoon while we were chasing elk; but we had the grim satisfaction of knowing that we left several of them dead on the ground, and many more wounded, while we lost only one man, and he, poor fellow, was scalped in our sight by the howling demons; but we were unable to help him, as they were twenty to one against us. Were it not for a feint of retreating in one direction while we moved in another, and charging the more daring whenever they came within range, and, finally, securing shelter in a deep gorge, we should, in all probability, have shared his fate. It took us two days to reach a settlement, and during that time we had nothing to eat, and only two drinks of water. The Indians have been punished so much since then that the country is safer now, and persons may travel there with an impunity most delightful to behold to those who could enter it only at the risk of their lives four or five years ago.

This digression brings me back to the plains once more, as it was from Laramie City that I made my ill-fated excursion. This city (!), which is nearly in the midst of the region whose name it bears, has a population of about 3,000, and all the usual adjuncts of civilization, such as schools, churches, and newspapers. It commands a splendid view of the surrounding country, and, far in the distance, the acute-crested Medicine Bow Range, with its numerous snow peaks. The most prominent of these is Sheep Mountain, which has received its name from the large number of wild sheep that formerly frequented it; and next to that come the rugged Elk Mountain and Mount Agassiz.

The city is a favourite headquarters for sportsmen who hunt antelopes on the plains. These were formerly shot from covert or from horseback during a "surround," but now the most sportsmanlike method is to course them with greyhounds trained specially for the work. This is most exciting amusement, and is as superior to hare coursing as bear stalking is to partridge shooting. The buffalo is found about forty miles north of Creston, and besides this animal the Territory affords refuge to such excellent game as the grizzly, black, and cinnamon bears, the elk, deer, mountain sheep and goat, panther, lynx, wolf, fox, beaver, otter, and smaller animals, besides numerous birds, and many of its streams teem with trout, white fish, and other species. As good mustangs can be bought for sums ranging from 20 to 60 dollars, and camping outfit and guides may be hired at fair rates, one can indulge in a hunting expedition at a comparatively small cost. It is real hunting too, and not mere battues, for one must walk, climb, and run, be up at daybreak, toil all day, sleep on the ground quite often, and put up with coarse but wholesome food; but that soon becomes an epicurean feast, for the exercise and bracing air give one an appetite equal to that of a hungry Indian. The stimulus imparted to mind and body by a week's hunting among the rugged wilds, grand scenes, and in the ozonic air of the mountains is something wonderful, and better for restoring the debilitated to health than all the medicines in the pharmacopœia. The life is free and breezy, and every nerve, muscle, and thought is aroused into such vigorous action that one begins to doubt if he is the same individual.

I spent a month in the country hunting and fishing and exploring odd quarters little known, and enjoyed it so thoroughly that I was loth to return to the artificial ways of civilization. If the races who lead such a mode of life are considered barbarians, I must say that barbarism is most delightful for a short time at least; for one is free from every trammel, goes where and does what he wills, and communes with the most edifying and ennobling of teachers, sublime Nature.

Many men in this region live by trapping along the streams for beaver, otter, mink, fisher, and other fur-bearing animals, or by "wolfing" in the lower foothills.

From Laramie City I proceeded eastward by rail, but the train had hardly moved out of town before it encountered one of those peculiar wind storms that have their birth in the snowy pinnacles, and move over the plains with a velocity somewhat akin to those that sweep the Karst, near Trieste, in Austria. Being rather cold, they are very pleasant in summer, as they give the atmosphere of the plains a bracing characteristic that produces an exhilarating sensation in man and beast. The first thing to attract the attention after leaving Laramie is the covered snow-sheds, and after these Dale Creek Bridge, twenty-two miles from the Laramie Plains. The landscape here is quite hilly, and eccentric boulders loom up apart and form long ridges. Each hillock seems to be crowned with a ragged scrub pine (*Pinus contorta*), whose appearance denotes that it has to struggle hard against violent winds and a meagre soil for existence. Many of the rocks glisten with mica scales, while others are almost black with hornblende, and they present a strong contrast to the warm red of the surrounding land. The crags of this region have also been furnished with cognomens, but the most prominent are Skull Rock and the Maiden's Slide. This latter name is most inappropriate, as the "slide" is covered with sharp stones and sharper shrubbery, and the walls send pointed lithological needles almost from side to side, so that it would be impossible for a person to glide past them without becoming impaled. The town of Sherman is the next object of interest, it being the highest point on the Rocky Mountains over which the railroad passes. It is notable only for its altitude, being 8,232 feet above the level of the sea, and the wild rugged scenery that surrounds it.

The mountain peaks loom far above it, and their craggy sides are covered with a sparse growth of ragged pines, that seem incapable of affording shelter to even a ptarmigan. A thunder-storm on these snow crests produces a most curious tingling sensation in the body, being exactly like that which one experiences on receiving a fairly strong shock from an electric battery. The whole person has a peculiar "crawling" feeling, the spinal column shivers as if ice-water were being poured down the back, and the muscles tremble as they do when one is recovering from a "sleepy foot." The emotion aroused is at first rather startling to the novice, but when he considers the relationship existing between the crisp snow and the atmospheric electricity he is soon calmed, and rather enjoys the novelty if the sensation is not too acute. It is a grand scene to behold from these pinnacles a storm raging in the plain below; to see the heavy clouds one mass of sulphurous glare; the raindrops falling down in seemingly endless lines of blue; and the white forked lightning darting about in every direction; while you sit calmly perched on your rocky chair high and dry above it, your solitude undisturbed by aught save the crackling, growling, and the rumbling roar of the thunder. It seems almost worth a visit to the country to enjoy this unique sensation and spectacle alone.

As Sherman has little to boast of in the way of attraction, one day suffices for a tour among the mountains, and, unless a storm is raging, that is one day too many, as wild animals are so scarce that a person may not get a shot at any higher game than a cave rat; hence I was not sorry to leave the place.

From this point down to Cheyenne the grade descends from 70 to 96 feet per mile, and the face of the country undergoes a decided change, the level plains being transformed into undulating wavelike plateaus, which produce a variety most agreeable to the eye. These were covered with rich grasses, yet I saw few cattle, and houses were very scarce; and those seen were, as a rule, simple log cabins, whose portals were embellished with the heads of antelopes.

I reached Cheyenne early in the evening, and remained there several days. This place, which has an elevation of 5,931 feet above the sea, was started in 1867, and in less than six months after the first cabin was erected boasted no less than 3,000 houses. During the building of the Union Pacific Railway it was frequented by gangs of the most desperate border ruffians, who made life and property unsafe, and by many reckless gamblers. It was then the most lawless and riotous town on earth; but law-abiding citizens soon settled there, formed a Vigilance Committee, and in less than three years they hanged, shot, or expelled the worst criminals, and finally succeeded in making its name a terror to evildoers. Murders were so frequent there that the saying of "only ten men for breakfast" became a sort of adage for signifying dull times, no fun, or business is slack.

They tell of a man there who shot a stranger because he would not drink with him when asked; of another whose pastime was to ride into a saloon on horseback, level his revolver at the barkeeper and ask for a drink, and ride out again without paying for it; and others who used to go around among the bar-rooms to pick quarrels, and kill without hesitation any one foolish enough to bandy words with them. Some odd tales are related of the indifference of the people to the loss of human life. One man, hearing a clamour in the street early in the morning, rushed out of his house to see what was the matter, and on returning, met a friend who asked him what was amiss. "Oh! nothing," said he contemptuously, "but a man killed; and I made a fool of myself running, thinking it was a dog fight!"

The standard of a gentleman there was also placed on a very peculiar basis, if the statements made are founded on facts. A tourist from New York having visited the place, he was taken in charge by a *habitué*, who wished to show him the sights and the lions of the town, but as the latter could only be seen in the drinking saloons and gambling establishments, they commenced their rounds after dark. In the first bar-room they entered they met a notorious character, and the *cicerone* introduced his friend to him in about the following manner: "Mr. Smith, allow me to introduce you to Mr. Brown, the leading gentleman in Cheyenne." A hand-shake and a drink followed the introduction, and when this formality was finished the mutual friend put his hand to one side of his mouth and "whispered," in a tone loud enough for everybody to hear, to the tourist, "Mr. Brown is A 1; first-class high-toned gentleman; couldn't find a better." Then in a lower tone, "He's killed twenty men; splendid fellow—full of sand—dead shot! I know you'll like him!" The friend could of course only acquiesce, and express himself as being delighted at meeting such a first-class gentleman.

Mr. Jones next appeared on the scene, the same formality of introduction was gone through, and Mr. Jones was recommended as a splendid gentleman—he had killed eighteen men. Several more were introduced, whose coarse language and blood-imbrued hands stamped them as border "gentlemen." But one man entered whose buckskin garments and knife and revolvers in belt seemed to entitle him to be placed in the same social position as the others; so the New Yorker asked why he was not introduced also.

"Why, you only want to know the gentlemen, do you?" said the friend.

The other signified that they might certainly be the most agreeable acquaintances.

"Then you don't want to know him," said he; then in a lower tone and with the hand beside the mouth, "He 's no gentleman; he 's only a scrub. Only killed four men, and more than a year in Cheyenne."

The latter part of the sentence was uttered in such tones of contempt that the visitor concluded that he was no gentleman, and therefore not worth knowing.

After spending a night among the "gentlemen," the visitor returned to his hotel, ruminating on the question—What constitutes a gentleman? The friend called at the hotel the next morning and found the tourist packing up and preparing to leave.

"Why, you 're not going to leave already?" said he.

The other replied that urgent business called him away.

"Well, I 'm very sorry for that," said the Cheyenner, "because you 've seen no fun since you 've been here. Nobody was killed last night; but if you stay until next Saturday, when an election comes off, you 'll see lots of fun. Perhaps you may see a dozen men shot."

The other expressed himself highly delighted with the prospective fun, but pleaded the urgency of business for being compelled to hasten away, and, jumping into a waggon, bade his amiable *cicerone* good bye, and was soon speeding away from the Cheyenne gentlemen, highly impressed with their charming social qualities and cultured amusements.

Cheyenne has now a population of 3,000 or 4,000, exclusive of the troops always garrisoned there, and being the capital of the Territory enjoys a political and social distinction commensurate with its importance. It is well built for a pioneer town, and has several good mercantile establishments, which do a large business. It boasts its churches, schools, and newspapers, is enterprising and prosperous, and growing rapidly. It supports two music or variety halls, and has a theatre, which is occupied occasionally by strolling actors. The braying of two brass bands belonging to the "hurdy-gurdies," gives animation to the main street during the early portion of the evening, as they attract crowds around them. The inhabitants are, like all Western pioneers, plain, unpretentious, generous people; hospitable to strangers bearing any credentials, quick to resent any intrusion on their rights, and as ready to accord justice to others as to claim it for themselves. Their liberality of thought is evident by the political privileges they have conferred on the gentle sex. Women run for office there as well as the men, and in many cases beat their sturdier opponents, for gallantry is a sentiment which prevails among all classes of men, from the rudest to the most cultured.

One woman there, who is or was a justice of the peace, might be taken as a good representative of the blind goddess, or a Rhadamanthus, if all tales told of her be true. She dispensed justice tempered with mercy, but never allowed mere sentiment to guide her decisions. Her husband was brought before her one morning for trial on the charge of intoxication in the public streets, and she promptly fined him 5 dollars; but as he did not have the money at command just then, he was sentenced to be kept in jail until the fine was paid. Her sense of duty was so paramount to conjugal feelings that she did not even recognize the prisoner at the bar during the trial; and when it was finished she refused to give him the sum necessary to extricate himself from the meshes of the law, so he was compelled to call on the generosity of a friend until he could go to the house. This may be even-handed justice, but it would be safe to infer that her millinery bill for the next year was somewhat small, and that she often wished she had not imposed that fine on her worse half.

Women also sit on juries, and, it is said, give as good satisfaction as men; and are deemed better than the ordinary dullards who preside over the fate of legal questions, as they are quicker in comprehension, and jump at conclusions by intuition. Their presence on such bodies may not be very conducive to a high state of refinement and the inculcation of that retiring modesty which is woman's greatest charm; yet it is said that they have been the cause of introducing more delicacy of speech among the limbs of the law, of suppressing the unseemly quarrels that often arise among them during the heat of a debate, and of making the judge more impartial in his decisions. It is evident, therefore, that they have done some good, and that their presence on juries is not an unmixed evil. Some of the men do not like their privilege, however, especially those whose wives have babies to attend; and even an occasional judge or lawyer might wish that Mrs. Smith and her squalling infant were absent when they were addressing the learned and high-minded jury of thirteen—

babe included—as such noise is detrimental to the effect of oratory, or the subtlety of legal lore.

The jurywomen have some odd ideas occasionally about their rights and privileges, if tales told of them are not the invention of jealous men. One burly member of the sex contradicted the judge so much during the delivery of a decision, that he was compelled to say that any juryman interrupting him would be fined for contempt of Court.

"'T want a juryman," said the Amazon; "'t was me."

"Well, if you don't stop interrupting the Court," said the presiding dignitary, "I shall certainly fine you."

"I'd like to see you," said the other.

"I fine Mrs. Jones ten dollars," said the judge, hotly.

"Well, how 're you going to get the money?" said the jurywoman.

The judge was beginning to show temper, when a peace-loving lawyer arose and said he had no doubt that Mrs. Jones was labouring under some misapprehension, and that if the honourable and learned judge would remit the fine, she would no doubt apologize for her behaviour.

"I ain't going to do anything of the kind," said she, spiritedly. "I don't allow any man to sass me without sassing him back, and the jedge ain't a gentleman to try and shut me up when I'm trying to do my duty."

That was enough for the choleric dignitary, and he ordered her to be imprisoned until a fine of 20 dollars was paid. This resulted in some bitter words from the spirited member of the jury; but peace was finally declared by the discharge of the prisoner from further duty—a triumph which she thought due to her independence of character. When she attempted to leave, however, after the Court adjourned, the constable prevented her until she should pay her fine. Not having the money with her, a messenger was dispatched for the husband, and he soon released her. When he heard the facts of the case, he said he was sorry that he had not seen the judge before the trial commenced, as he would have informed him that the "old woman was cranky sometimes, and would sass like a New York bootblack when she got her back up." He also hinted that if she were excused from jury duty in the future it would be better for the peace of the Court-room.

In cases appertaining to the relations of the sexes, men are said to be rather partial to the feminine jury, as it is more apt to do them justice than one composed entirely of the sturdy sex.

"I'll tell you what," said a veteran of many marriages, who was sued for breach of promise and escaped the penalty, "them womin know mighty quick how a fellow is taken in by designin' widders and gals that seem innocent-like, and knowin' it they give a man some show; for womin is things no man can know, and they know it." After this sage remark he intimated that if he were sued for breach of promise of marriage again he would take the case before a female jury if he could.

They are very severe, however, on any violations of conjugal fidelity or injury to young girls, and the culprit who escapes a sentence is considered fortunate. As an experiment in what women can do, their political enfranchisement is interesting; but it is yet too limited to be able to arrive at a definite result, or to deduce any important sequence beyond the fact that some married men do not like to have their wives attend juries, and that their political power has not yet brought about the millenium which some women's rights advocates have predicted. What would occur if the privilege were extended to women in every country it would be difficult to anticipate; but one thing is certain in Wyoming, and that is, that their enfranchisement has had little if any effect in changing the political current of thought, in checking intemperance and other vices, in elevating the tone of politicians, or in improving the morals of the people at large. Women are like men, I suppose, neither better nor worse than the general character of the society which surrounds them, so that it would be unfair to expect impossibilities from them.

The country around Cheyenne is rather inclined to be flat, with a gradual slope to the east. Since the place was first settled the fall of rain has been rapidly increasing from year to year, and many birds which were strangers there at first are now very common. It has long been known that field birds follow the footsteps of man, and are most abundant where he dwells, as they can obtain food more readily and in greater variety in his cultivated fields than they can elsewhere. Among the first of the feathered families to follow his migrations are the robin, blue-bird, yellow-bird, thrush, cedar-bird, the painted sparrows, finches, trupials, and all the species of the *Paridæ*.

Cheyenne being the most easterly town of any importance in the Territory, I took the train to Denver, Colorado, and there finished, for a short time, my rambles in North-western America.

In reviewing a tour over this magnificent empire of 579,697 square miles, I may say that the impression left on my mind is, that it is the equal of any area of similar dimensions in fertility of soil, abundance of grasses, and wealth of minerals; and that none can excel it in healthfulness of climate, or approach it in grandeur of scenery. Its wonderful geysers have no prototypes; its snowy pinnacles are the loftiest on the continent, with one exception; its rivers are unparalleled in North America in their length, volume, and beauty of surroundings; its cataracts are exceded in height only by those in the Yosemite Valley, but the latter cannot compete with them in power and massiveness; its lakes will compare favourably in size and picturesqueness with those of Switzerland; its cavernous precipices can be approached only by those of the Himalayas; while its forests have no peers in extent, density, and towering altitude; and as for a game and fishing region, it excels any portion of the continent. True, it has its drawbacks, in possessing some arid plains and a severe climate in the mountain plateaus, and being devoid, in parts, of rapid means of communication with the remainder of the continent; but the latter fault will disappear before the advance of population. Excluding Utah, the white population of this vast country does not, in all probability, exceed 350,000 whites; and it would be safe to infer that it is not so much. As the great majority of the inhabitants are engaged in trading, mining, manufacturing, or in personal service, the number who devote their attention to agricultural pursuits is but a mere fraction; hence, with the exception of Utah, Western Oregon, and Western Washington Territory, the country is almost in as primeval a condition as it was hundreds of years ago.

As few tourists visit the region, except those parts traversed by railways, its scenery is little known; yet it may be said to be without a peer in all the elements of beauty, and in many of its wonderful characteristics. Each division varies so much in soil and climate, and often in productions, that one may find there the land and atmospheric conditions most suitable to his tastes; and he must be difficult to please indeed if he cannot satisfy himself in some portion of it. It is, undoubtedly, the country of the future in the United States; and many persons are now flocking in there from every portion of the northern continent, and from Australia and Europe. Some of its sections, even the very smallest Territory, is larger than the whole of the New England States, and any two of them are larger than the combined area of the Middle and the New England States. The country under consideration is nearly five times as large as Great Britain and Ireland, embraces over one-sixth of the total area of the United States, and is equal to more than one-seventh of Europe. These few comparisons may give an idea of its vast extent; and when its sparse population is considered, it may be said to be scarcely inhabited.

CHAPTER XIX.

A SUMMARY OF THE GAME ANIMALS.

The various species of the bear, cat, wolf, fox, buffalo, and deer families; the mountain sheep and goat, and the smaller animals, and the mode of hunting them.

Birds.—The various species of swans, geese, ducks, grouse, quail, snipe, plovers, rails, turnstones, avosets, cranes and herons, curlews, godwits, and pigeons.

Fish.—Abundance of trout, and the different species of the family—Other fresh-water fauna fit for angling purposes—The baits generally used.

NO division of the American continent is so well adapted for the sustenance of animal life as that which lies between the Rocky Mountains and the Pacific Ocean, and especially that portion west of the Cascade Range lying between the 40th and 50th parallels of latitude, as it possesses a mild, equable climate, immense forests, which afford an abundance of food and shelter, and a varied topography which enables every animal to select the *habitat* most suitable to its mode of life. The scarcity of population permits all to increase to the fullest extent, and the result is that the region teems with almost every species of game indigenous to the continent, and some of them belong to families not found east of the Rocky Mountains.

At the head of the quadrupeds stands the grizzly bear (*Ursus horribilis*), whose range extends from Mexico to the western slope of the great chain, but its *habitat* on the Cascade Range does not extend north of the 42nd parallel. It is little hunted, owing to its dangerous character; and if persons meet it they are more likely to seek safety in flight than wage a contest against it, as it can carry a large quantity of lead before delivering up the ghost. Express rifles, or those carrying explosive bullets, are the only effective weapons to use against it, unless one hunts in a party, and even then a 45 calibre rifle at least should be employed if a person would not be forced to seek safety in a tree, for that is the only refuge from this animal, as it cannot, like its congeners, climb perpendicular ascents. Should one seek safety in a tree, however, the bear might keep up a siege of several hours, so the best plan would be not to open a warfare against it unless one has every advantage.

The black bear (*Ursus Americanus*), is so abundant as to be scarcely noticeable. Unlike its congener, it flees from the presence of man, and is never inclined for a quarrel unless it has been wounded. It frequents all the wooded regions, especially where nuts and berries are plentiful, and may always be found near spots in which the bearberry-tree grows. Being little hunted for its fur, it is exceedingly common west of the Rocky Mountains, and one or two may be killed any day in the wooded region west of the Cascade Range. Two varieties of this species, the brown and cinnamon bears, are found among the higher foothills of the interior plateaus. Some consider them to be distinct species, but that is evidently a mistake, as all these colours may be seen in the same litter.

Bears are freqently trailed and hunted with small dogs combative enough to snap at them whenever an opportunity is presented, but not to stand a charge or a hug, and which possess an activity that enables them to retreat from a blow of the paw.

The *Felidæ,* which are quite common, embrace three or four species; namely, the cougar, panther or mountain lion (*Felis concolor*), the Canada lynx (*Lynx Canadensis*), and one or two species of the wild cat (*Lynx rufus* and *Lynx fasciatus*); though in my estimation the latter two are the same species, differing only in colour. These frequent the dense forests and foothills; and as they can obtain food with little trouble in their native haunts, they are not very annoying to farmers. They do, however, make raids on the farmyard occasionally; hence both poison and rifle are used to decrease their numbers. They are chased with dogs sometimes, and when they take to a tree, which they do readily, are shot. As a wounded cougar is a dangerous foe to encounter, a heavy rifle is used for hunting it.

The *Canidæ* are represented by three species or varieties; viz., the grey wolf (*Canis occidentalis*), the dusky wolf (variety *obscurus*), and the coyote or prairie wolf (*Canis latrans*). The two first are common in the forests, and the latter is confined to the open plains east of the Cascade Range, where it enjoys an easy life, owing to the abundance of hares, ground squirrels, and other small animals, which provide it with an extensive commissariat. Some capital sport may be had by coursing it with greyhounds, or hunting it with fleet foxhounds, as the creature can get over the ground, when well scared, with the speed of a locomotive. The Indians of Washington Territory believe it to be a demon or deity, and this causes them to pay it much respect.

Foxes are very abundant everywhere, but the most highly prized is the silver-grey variety, its fine showy fur being eagerly sought by furriers. It has the peculiar habit of climbing a tree when pursued by dogs, and this enables it to save its brush very frequently when all other tricks fail.

The buffalo (*Bos Americanus*) is found from the Missouri River to the mountains of Montana and Wyoming. It formerly extended westward to Oregon, but it has long since disappeared from that region; and I do not know of any west of the Rocky Mountains now, except a few wanderers.

The modes of hunting this animal are confined to two, and these are to still hunt it or to chase it on horseback. As the former method is confined to skin-hunters and hungry pioneers and travellers, it is scarcely necessary to refer to it, as it is nothing but wanton slaughter, or the power to skulk along ridges and ravines until a herd is approached, when it is shot down in detail. The number of animals destroyed by the peltry-hunters must average over 1,000,000 per year, and at this rate of destruction the fate of the family will soon be decided. To hunt them successfully on horseback requires a fast and trained steed that will keep alongside the herd, and allow the rider to empty his rifle or revolver into it at the distance of a few paces. As the buffalo can carry a large quantity of lead, the best hunters ride close up to it, and place their weapons near its spinal column or fore-shoulder, as a shot in either of these parts cripples or kills it immediately. Those who earn a livelihood as hunters burn the hair of every buffalo they shoot from horseback, so close do they place their rifles to the body. For a novice, the best weapon to use would be a 50 calibre revolver, as that carries a large charge of powder and a heavy ball, and is as effective as a rifle at close range, while it is much more convenient in handling, and is less dangerous. To hunt successfully, one should ride along the outer line of a herd in motion, keeping close beside it, and empty the revolver into the nearest, taking care that no shots are wasted, and that the animal is killed, or wounded in such a manner that it cannot escape.

The only real danger in buffalo hunting is confined to two forms; namely, having the horse thrown by breaking into a prairie dog village, or being charged suddenly by an angry, wounded bull. The former is avoided by keeping the horse well in hand, and noting the ground ahead; the latter by passing on when the animal is shot. Indian mustangs look out for these charges, and break away at the first intimation of one; but the abruptness of the wheel often sends a novice sprawling on the ground, and leaves him to be trodden or gored to death by the maddened herd. The dangers on the whole, however, are rather trifling to any one who does not lose his head in the wild excitement of the run, or does not get entangled among the throng of tossing horns, an incident by no means rare with the inexperienced.

A species of this animal that frequents high, craggy plateaus is called the mountain bison. It has shorter limbs than its congener of the plains, to suit its hilly *habitat*; it is active, vigilant, and shy, like all mountaineers; and is, like them, an expert at picking its way amid steep bluffs and yawning precipices. It is found now, so far as I could learn, only in Montana, and even there it is confined to the Yellowstone Region and the rocky plateaus north of it.

The deer family is unusually abundant, and the entire region west of the Rocky Mountains may be literally said to be one vast deer park, in which hundreds of thousands of antlered monarchs roam at will, unmolested by all foes except an occasional cougar and some white and red hunters. This is more especially true of Oregon and Washington Territory than any other section of the country, as their western divisions are covered with dense forests of conifers, which are seldom disturbed by the footfall of man; and the grasses and shrubbery, which afford an abundance of food and shelter, grow in tropical luxuriance. With few enemies, a mild climate, and all the conditions necessary to vigorous life, it is no wonder that the deer should increase in such numbers as to be considered nuisances by many pioneers; and that every means—from the rifle to poison—should be resorted to in order that their depredation on young crops of cereals should be checked or limited to the smallest possible degree.

Besides numbers, the next thing most remarkable in the *Cervidæ* of the Pacific Coast is the variety in species, there being at least seven distinct species, besides one or two varieties, which, though having distinct characteristics, are not yet entitled to the dignity of being classed as a species.

At the head of the family stands the moose (*Alce Americanus*), which is said to range from the northern portion of British Columbia to the mountains of Montana, Idaho, and Washington Territory. It does not, in all probability, move farther south than the 48th parallel of latitude, as I never heard of it in Oregon, and but very little of it in Idaho. The Lumni Indians, in the north-western portion of Washington Territory, say that it was formerly quite common in their section of country, but that it has moved farther into the recesses of the forests and higher up on the mountains since the advent of the white man.

That they do not confound it with the wapiti or elk is evident from the fact that they have a different name for it, and readily recognize its horns as portrayed in works of natural history. I have heard that it is found extensively in the Cœur d'Alene and Kootenay Mountains, in Idaho, and is largely hunted by the Kootenay or Long-knife Indians—a wild tribe that inhabits these mountains, and makes it dangerous for a stray naturalist or Nimrod to seek knowledge or pleasure in that country.

The red men capture it by means of pitfalls, and traps made of fallen trees, but their most successful mode is to lie in wait near its watering-places, and shoot it from under cover when it comes to drink. They never follow it for hours and days as their brethren in Canada do—for the simple reason that they can obtain food as good with much less trouble, and that they are thoroughly indifferent to such feelings as the enthusiasm of the chase. One thing may be said in favour of the Indian, and that is, that he never destroys the life of a valuable animal needlessly; hence, probably, the reason why he and all wild animals dwell in close proximity; whereas the presence of a white man will send them scampering off in a very short time, and the chances are that they never return. To this fact might be attributed the expulsion of the moose from the vicinity of all places settled by whites on the Pacific Coast, whereas it flourished near the encampments of the northern red men. Its true range lies between the 48th and 65th parallels; but I should be inclined to say that, with the exception of those that roam as far as the Grand Coulee of the Columbia, few are to be found lower than the 49th parallel. Its worst foes on the Pacific are the Blackfeet of Montana, who organize regular expeditions for its pursuit late in the autumn, and, it is said, capture or slay large numbers, they preferring its flesh to that of the buffalo.

The next in importance to this is the wood caribou (*Rangifer caribou*), whose range extends from the northern mountains of Idaho to the sub-arctic regions of British Columbia and Alaska. The Indians of the latter countries kill large numbers with their heavy, powerful arrows, but much more by digging pitfalls along their watering runways. As it is the largest animal in their forests that is numerous, they depend principally upon it for food, while its hide is used for making wigwams, and its bones for making knives, spoons, and arrow-tips. It is easily slain by an ordinary adept with the rifle, as it will allow the hunter to approach it on the leeward side to within close range; but let his odour once reach its nostrils, and it will be off like a rocket. It is gregarious in habit, and moves in herds, not unlike the buffalo, when going to water in the morning and evening. One cause for this banding together may be to prevent the attacks of bears, or the packs of gaunt, fierce, and hungry wolves that haunt the wooded sub-alpine plateaus. The caribou, which is known in England as the reindeer, possesses high gastronomic qualities, as many of the old servants of the Hudson Bay Company well know. The American animal is larger than its European congener, I should judge, as an adult varies from 3½ feet to 4 feet in height, and from 6 feet to 6½ feet in length—that is, from nose to base of tail, the cauda itself measuring 4½ inches; the ears average about 5 inches, and the face from 12 inches to 15 inches in length. It changes its colours according to the seasons, but its spring garb is by far the most gaudy. It has then a coating of brownish red, the tips being a light grey; the nose, ears, and exterior surface of the legs are brownish; the neck is inclined to be the whitest portion of the body; the belly and tail are white, and a whitish band extends around the hoofs. One can readily imagine what a splendid sight a herd of these stately creatures must present as they are grouped on the banks of a wood-buried lake on a fine morning in spring, or late in the autumn, when the many-hued trees are in their most interesting toilet.

The elk or wapiti (*Cervus Canadensis*), is abundant in the entire wooded region lying between the towering, snow-covered Cascade Range and the Pacific Ocean. Its favourite *habitat* is the low forest-clad mountains, from 3,000 to 6,000 feet in altitude. It is found from Montana to California, but is most numerous between the parallels of 42 and 50, where, in many instances, it may be seen in herds numbering from 50 to 500. Like the caribou, it is very gregarious, is devotedly attached to its young, and as brave an animal as exists when it is brought to bay by the hunter, or feels itself compelled to defend its young. Along the coast range of mountains running through California, Oregon, Washington Territory, and portions of British Columbia, it may be numbered by thousands; and so little does it know of the presence of man, in most cases, that a hunter may approach a herd to within a few yards or feet on the lee side without eliciting from it any other expression than that of stupid curiosity. Even the reports of a dozen rifles have no other effect upon the groups than to cause the more timid youngsters to trot off a short distance, then turn to gaze at the smoke or at such of their companions as may have fallen victims to the hunter's skill. Should they inhale his odour, however, they would recognize him as an enemy immediately, and flee from his presence. A wretched little cur will keep a herd scampering all day long, whereas the death of a score would scarcely affect it. I have seen four or five watch the death struggles of another with a half-idiotic stare; and though they fell one after another the survivors made no attempt at escape, although their deadly foe was standing in plain sight to the leeward. When they learn the character of the enemy, however, which they do after being hunted a few times, the man who gets a shot at them must keep his eyes fully opened, and be ready to fire at the first glimpse.

To hunt them successfully in the forests of North-western America, a shot-gun loaded with buck-shot should be used, as the shrubbery is so dense that a rifle-ball would be easily turned from its course unless fired in an open space. The effectiveness of this mode of hunting depends, of course, on the proximity of the hunter to the animal, which requires to be hit in a vital part to bring it down promptly. Buck-shot, delivered at a range varying from twenty to forty yards, is apt to be more effective, if both barrels are delivered in rapid succession, than any rifle-ball; and the chances are ten to one that the animal is badly wounded, if not killed, so that it cannot run very far, and if pursued by dogs, is soon exhausted. If a herd is startled even by a cur, the most burly stag or active hind heads the column, the cows and calves form in the centre, and the sturdy young males and aged veterans close in the rear, and in this manner they dash through the forest, their heads well thrown back on the necks to prevent the antlers being caught in the shrubbery or pendent branches. The antlers of a full-grown male have from four to seven prongs, but the number never exceeds the latter, and they vary in width (from tip to tip) from 5 to 8 feet. During the rutting season the males are so pugnacious that many are killed, and not a few lose their magnificent antlers.

The size, strength, and speed of this animal ought to fit it for some useful domestic purpose. It could be trained to be a valuable beast of burden, and its speed is so great, and it has so much power of endurance, that it could be used either for drawing a carriage or to carry couriers who have to ride long distances at a rapid rate. By treating it as geldings are, the pugnacity and ill temper it displays during the rutting season could be readily overcome, and it would be rendered as docile as a donkey.

The next in size to the preceding is the *C. macrotus*, or mule-deer, so-called from its exceedingly long ears, which give it a decidedly mule-like appearance in front, while its caudal termination completes the resemblance, that being slender, devoid of hair beneath, and terminating in a black tuft. The ears and tail are nearly of the same length, and the colour of the hair in winter is of an ashy-brown colour with light grey annulations. This species is principally confined to the elevated regions between the Rocky Mountains and the Cascade Range, so that it might be called the deer of the plateaus. It is very fond of wooded mountains varying from 2,000 to 5,000 feet in altitude, for among them it finds plenty of shelter and dainty herbage during the summer; but in winter it seeks the foothills, where the snow is not so deep as it is higher up. In running, like all mountain animals, it takes very high steps, and this gives it a rather ungainly aspect in motion. It is not so fleet as some of its congeners, but what it lacks in this respect it atones for in greater vigilance and caution. While not so numerous as some species of the plains, it is still abundant enough to furnish the most enthusiastic hunter with plenty of sport. Before the rutting season commences, in November, its flesh is in splendid condition, being tender and succulent, and the equal in every respect of the most delicately reared of its family.

The most characteristic species of the Pacific *Cervidæ* is the *C. Columbianus*, or black-tailed deer, whose eastern *habitat* is limited by the Cascade Range, the great plant and animal barrier of the Pacific slope. This differs from that called by the same name in Montana, Wyoming, Idaho, and other Territories—the residents of these regions applying the name generally to the mule-deer. The former is, above all others, a lover of the forest, and amidst its deep shadows and lonely glades finds its most congenial home. It is the species most generally hunted with hounds in the North-west, owing to its numerical superiority, great fleetness, size, and palatable flesh. A person is allowed to hunt it in the Territories at all seasons, I believe; but in Oregon it is protected by law for the first six months in the year.

In Oregon, Washington Territory, and adjacent regions, dogs are used largely for the chase, as the forests are so dense that it would require sharp eyes and a thorough knowledge of the country to enable one to find the deer in the matted shrubbery; and nothing can be more exhilarating than to hear the music of a sweet-voiced pack in these forests on a fine rosy morning, when going at a view-halloo pace, for every tree and rock seems to take up the refrain and to echo it over and over in soft yet full and silvery tones. And the antlered monarch himself, as he dashes through the varied, luxuriant, and brilliant shrubbery, presents a scene of graceful motion and vigorous action that few can behold without a feeling of enthusiastic admiration. Shot-guns loaded with buck-shot must be used in these woods also, a rifle being scarcely of any use, owing to the rarity of openings that would afford even a remote chance of firing at it with any degree of success. The most popular, and in fact the only successful, method of hunting this animal is to place men in some convenient position near its well-worn watering runway, and when it passes by on its way to the river, probably miles ahead of the hounds, to give it both barrels in rapid succession. If coming towards you, it should be fired at when it is a few yards away; if passing on either side, I have found it most convenient to let it run by and fire at the flanks. Should a person wish to get a standing shot at it, all he needs do is to give a sharp whistle or call, and if he remains unmoved the deer will halt immediately and give a splendid opportunity for deliberate aim. Should one make the least movement, however, the animal would be off like a flash; hence it would be best for the hunter while waiting to have his gun in such a position that it could be brought to the shoulder the moment he calls or whistles.

During the full of the moon in November, many persons make it a practice to stand on the runways at night, and, as it is the height of the rutting season, they can readily kill which one of the sexes they please. I need hardly say, however, that the flesh of either is very unpalatable, especially that of the males, which seems to be reduced to a mere mass of fibre; and the neck, which becomes swollen to double its size during this period, is unfit to eat, the flesh being actually repulsive in look and flavour. The bucks, which are most pugnacious during their salacious epoch, are often killed by the hunter while engaged in their sanguinary combats, if they do not kill each other. It seems rather an odd fact that while the skeletons of bucks with several prongs may often be found in the woods with antlers interlocked, no one that I know of has found a one-pronged buck in the same position; the cause of this I would infer to be that the short straight horn of the younger animal is too effective for the clumsy branches of the older, and that it usually proves victorious. Another remark that may be made here parenthetically is that the number of branches on the horns cannot be taken as any true indication of the age of a deer, if the size of the animal and the number of prongs are supposed to have any relation to each other, for it is no unusual circumstance to find a small animal of the same species with a greater number of prongs than one much larger.

Another means of hunting the deer is to lie in covert near a sulphur or a salt spring, or "lick," as it is called. They are exceedingly fond of the former, and drink it with the same apparent feelings of pleasure that an epicure of the old school would drink a bottle of his best port or champagne. Where these sulphur springs are numerous the animals may always be found near them, or revelling in delightful draughts of the water both morning and evening. Though timid and easily alarmed from a section of the country, hunters find that a love of these waters overcomes the natural fears of the deer, and that it will return to them at the first opportunity, if it can do so without beholding a foe. Although this is not a very exhilarating way of hunting, yet it keeps a person steadily on the *qui vive;* and if it is dark his disordered fancy causes every bush to seem a deer, and every gust of wind through the shrubbery to be the footfall of one approaching his lair. All these systems of hunting may be interesting enough in their way; but for real pleasure there is nothing like hounds and horns and a rosy morning, and the antlered monarch going at full speed through the forest and bounding over fallen trees. To furnish this pleasure in its most subtle form, I know of nothing equal to a splendid black-tailed stag in vigorous condition; and he may be found in such numbers along the shores of the Northern Pacific Ocean that the region may literally be called the Paradise of sportsmen.

The next member of the family to attract attention is the *Cervus leucurus*, or white-tailed deer, which has probably the most extensive *habitat* of any of its congeners, it being found all over the Pacific Coast, and from the ocean to the Rocky Mountains. It assumes the place of the *C. Virginianus*, or Atlantic deer, west of these mountains; yet several naturalists hold that both species are identically the same, and that the slight differences between them are the result of climate or *habitat*. One of the theories advanced in support of this proposition is that the dermal glands are alike in both, whereas they differ in all other species. Admitting this, it can be said *per contra* that both differ in so many other characteristics that the western one is entitled to be classed as a variety at least, if not as a species. In the first place it is larger and heavier than its eastern congener, has a longer cauda—hence is called also the long-tailed deer—and differs from it in several minor habits and tastes. It is very common in all the forests of the Far West, but its favourite haunts are the small coppices that skirt the borders of prairies. Unlike the black-tailed deer, instead of doubling and keeping to the mountains, hills, and ravines, when started by the hounds, it makes a straight line for the nearest river; but, if checked in its course, it will turn back and continue circling until it is frequently caught by the hounds through exhaustion. When running, its jumps are shorter and more rapid than those of the other species, and this is one reason probably why it tires so soon. The experienced hunters of the West know at once when a whitetail leads the pack, so their first move is toward the water. Should the pursued animal reach it before them they move down the stream, well knowing that when it takes to the water it will instinctively go with the current until it finds a good landing spot or a place of concealment under the pendent boughs of some friendly trees. Having found the latter, it will remain there even though the pack may be baying on the opposite side; and the hunters, knowing this trait, glance along the water for its head, which is readily recognized by the large and intelligent eyes, or they beat the bushes. If they have a few well-trained old hounds, however, the latter work is unnecessary, as an experienced hound will follow the trail on the water almost as well as he will on land, especially if the wind is against him. The hounds used in the region I refer to are generally small, keen-nosed creatures, yet not very slow. They are selected specially for their size, as larger animals would soon become leg-weary in trying to force their way through matted shrubbery, or become tangled in the low overhanging bushes, or have their feet filled with thorns. If too fast they would also drive the deer at such a pace that its flesh would be injured, and the hunter would not have as good a chance of shooting it as if it were going at an easy gait. A good nose and a moderate pace are, therefore, the primary requisites of the hounds of the Far West; for the deer are so numerous that if the pack did not possess a nose subtle enough to keep the first trail taken, it would be compelled to go on the tracks of forty, perhaps, in an hour.

The white-tailed species is so common in the vicinity of clearings that farmers have to keep several dogs to drive it from the young crops of cereals, and in many instances they resort to poison to clear the neighbouring woods of its presence. During the rutting season the male becomes so daring that he will jump into the vegetable garden surrounding a farm-house to lead his mate to delicate pastures; and when startled, instead of running away, he merely gives the peculiar snort or whistle of his family, raises his head proudly, as if to bid defiance, and frequently stamps with his fore foot, making a *riposte* to prove he was ready for the fray. I have known a farmer to shoot over a dozen from his bed-room window one evening, yet they continued to come on, until he at length went out and scattered poison over some of his young wheat to stop further depredations. The result was that several dead deer were found the next morning.

An albino deer is found in several parts of Oregon and Washington Territory, but it is most common on Whidby Island, in the latter region. It is vari-coloured, the hues changing from white to red, brown, chestnut, and grey, besides several combinations of these colours. On the island mentioned it is the prevailing species, its only congener being the white-tailed deer—so far as I could learn. Those I saw were certainly the handsomest members of their family to be found in any country; and so much are they admired that many persons along Puget Sound keep them as household pets. Even the unromantic boatmen plying on that sea often have one aboard their craft. The spotting may be the result of climate, yet the fact that the species herd together and produce their young spotted like themselves, that the hues are not variable, and that the type seems permanent, caused me to designate it as the *C. leucurus*, var. *variatus*, in order to distinguish it, and to prevent the elevation of what may be a mere variety into the dignity of a species. This variety is found occasionally in Oregon, but it never moves in herds as it does in Whidby Island, nor, so far I could learn, does it generally reproduce its kind with the same hues.

Another variety, called the white or mountain deer, evidently a variety of the black-tailed deer, is found high up in the wooded plateaus and near the snow-line of several ranges. This also, I understand, retains its snowy colour throughout the year, and moves together in groups, carefully avoiding its more sombre-coloured kindred. The Indians believe it to be a spirit, and scrupulously avoid killing it for fear of the serious consequences resulting from the "slaying of a departed spirit." Hearing that it was so common in the northern part of the Cascade Range, I took the liberty of classifying it as var. *albus;* but it was after I also learned that the offspring were white in colour when born.

The last of the Pacific *Cervidæ* is the so-called prong-horned antelope (*Antilocapra Americana*), an animal which differs from all its relations in, primarily, that its horns are hollow and deciduous, that it has the greatest fear of woods, that it is strictly herbaceous in its diet, that it is never to be found beyond the high prairies having a gravelly soil and producing the bunch or the buffalo grass, that it is the fleetest animal known for a short distance, that its hair is tubular, and that it is the most gregarious of its family. It is smaller and lighter than the deer, the body is short and round, the neck seems stiff and short and is always carried erect; the ears are small and straight, and the head is short and carried very high when gazing. When a herd is in motion the white patches on the flanks and rear give it a piebald appearance, as they contrast strongly with the slight reddish mane and the tawny back. It is devoid of the accessory hind hoofs—the adjuncts of nearly all ruminants; it has no lachrymal sinus; the eyes are large, dark, and brilliant—much larger, in fact, than those of any other member of its family; the limbs are long and tapering, and it possesses several glands (all dermal) which emit at times an acrid odour. It is very timid and vigilant in its natural state, but when domesticated is playful and affectionate. Gentleness subdues it readily if it is taken young, and it soon learns to follow one about, like a pet dog. It may be found in several farm-houses in Nebraska and Wyoming, and seems as domesticated as the farm-yard fowl. It does not, however, breed in captivity, although the bucks are salacious enough during the rutting season; and I doubt if it lives long.

This animal formerly occupied all the great treeless interior basins between the Rocky Mountains and California, but, owing to the advance of civilization, it is rapidly decreasing. In California in olden times it roamed in immense herds over all the lower plains, but it is doubtful if many can be found there now. I have found it more abundant on the plains of Nebraska, Colorado, and Wyoming than in any other portion of the country, although I have seen large herds also in Eastern Oregon and Washington Territory, where it is little hunted. Its bump of inquisitiveness is so large that it is often lured to death by a red rag stuck on a pole, planted near where the hunter may be concealed; but that system of hunting is now confined to the red man, or the hungry paleface who cannot get a shot at it otherwise. The most popular method is to keep a few well-bred greyhounds which have a small share of the bloodhound, mastiff, or foxhound blood in their veins, to give them pugnacity and staying power; for few of the pure-blooded animals will pull down an antelope, although they may chase it. The most efficient dogs for antelope coursing that I saw in the West were large, strong-limbed, heavy-shouldered, and long-jawed fellows, which were a combination of one-eighth bloodhound and the remainder greyhound. This admixture gave them combativeness, endurance, and speed, and few were the bucks that could escape from a brace of them; while they were also useful as watch-dogs—perhaps too fiercely useful to please a wayfarer. A pair of these when started from the leash, and under cover, will single one antelope out of the herd, and ranging themselves one on each side, take every advantage of its turnings; and though it may outrun them for a while, their staying powers prove good in the end, and the poor exhausted creature falls an easy victim to their fangs. Three couples of good dogs will easily kill fifteen or twenty antelopes in a day by hunting them alternately, and allowing fair intervals for rest, and come home in the evening apparently none the worse for their heavy labour. Men chase the antelope on wiry Indian mustangs, which, like the pursued, show a good burst of speed for a short distance, and keep close enough to a herd to empty their revolvers into it. As a pleasure, antelope coursing is far superior to hare coursing, and for the reasons that one can see all the turnings, that horses can be used, and that the pursued shows much more strategy in trying to escape than the terrified pussy.

The wild goat (*Aplocerus montanus*), is one of the most interesting animals on the American continent, alike to the lover of field sports and to the naturalist. Being the only species of its family that is indigenous to the country, and making its home amidst the gloomy chasms and rocky fastnesses of the great mountain ranges that divide the Pacific region of North America in every direction, a certain air of mystery clung to it, which made it doubly interesting as a trophy of the chase. Many skilled hunters were, therefore, anxious to seek it amid the snow-enshrouded peaks which were its favourite retreats; but few of them were successful, and the result is, I believe, that there is not a pefectly preserved specimen of the animal to be found in any museum in the country. There are several, however, in the British Museum, which were presented by the Hudson Bay Company and some members of the Canadian Boundary Survey of the Pacific; and it is from these specimens that the best idea of the anatomical structure and characteristics of the agile creature has been obtained.

Being a member of the *Cavicornia* or hollow-horned family, it was said by some naturalists to be deficient in several of the peculiarities of a true goat, and to be so closely allied to the antelope as to be in reality a goat-antelope.

Professor Gray of the British Museum has classed it amongst the *Mazame;* but that classification would also seem open to objection. Not having its position actually defined at present, although some naturalists think it is as true a goat as its congeners of the Himalayas and other Asiatic mountains, I can only say that, judging from mere bodily outline, physiognomy, and general characteristics, the casual observer would be inclined to coincide with the latter opinions, for it certainly has all the appearance of a true goat, and bears a stronger resemblance to its domesticated relatives than the "big-horn" does to the fleece-bearing sheep. The head and face are unmistakably those of the true goat; but the body is much heavier, deeper, and less rounded than that of the common species; the limbs are strong, sinewy, and well formed, and evidently intended more for leaping than running; and the horns, which are "ringed" at the base, are quite short, conical, somewhat recurved at the extremities, and of a darkish hue. The nose is strongly ovine; the eyes, which are quite small, seem intended for length and intensity of vision rather than for a broad range; and, having no tear-bag or muffle, it bears no resemblance to the deer family in that characteristic. The chin, which is thoroughly capridian in outline, is ornamented with a whitish beard of the usual tapering form. The outer hair of the body is somewhat long, rather coarse, and of a whitish hue; but the inner is fine, short, tenacious, and quite fleecy, and is not unlike that of the Angora goat. The tail is about the length of that of the common species, but being quite heavily covered with hair it seems longer and broader. The hoofs, which are full in outline and very hard, have a dark polished appearance, not unlike a certain species of slate found in the sedimentary formations of the West.

Its range extends from Oregon on the south to Alaska on the north, while its eastern limit is checked by the Rocky Mountains. Since the settlement of the Pacific Coast the animal has been driven to the very highest mountain ranges for food and security, and it is only near snowy pinnacles that it may now be found. Judging from the conversations of an old Indian in the Walla-Walla Valley in Washington Territory, it formerly occupied the peaks of the Blue Mountains, a range having an altitude of only 5,000 feet; but I doubt if a specimen can be found there now. The Indians, to whom it was known as the *wow*, state that it was very difficult of approach owing to its vigilance, keenness of scent, and the extensive view which the sentinels, always on duty, had of the surrounding country. Their most successful mode of hunting it was to drive a flock towards a canyon, where a party was concealed, and to shoot them as they dashed up or down the bluffs. They succeeded sometimes in bagging one by means of pitfalls and traps, but they placed little dependence on such means of capture, owing to the caution of the leaders. In many places where it was formerly quite numerous it has disappeared entirely, but not through the war waged upon it so much as its natural inclination to keep away from the haunts of man, and especially, according to Indian tales, of the white man, whom it seems to fear more than any other foe.

An old chief, known among his tribe on Puget Sound as Mowich, or the "deer," from his success as a hunter, informed me that the goat was more abundant than ever along the snowy crests of the Cascade Range, especially in the vicinity of Mounts Baker, Rainier, and St. Helen's, owing to the cessation of peltry hunting, which was so vigorously prosecuted by the North-

Western Fur Company, and the gathering of all but a few vagrant Indians on the reservations. This would seem quite probable, not only in that region, but in every other section that it has been known to frequent; so that it would be quite safe to state that it is more numerous now than it has been for many years. From inquiries among hunters, both pale and red, I should deduce that it may now be found in the mountains of Wyoming, Idaho, Montana, Colorado, Oregon, and Washington Territory; but I should infer that it was more numerous in the latter than in any other section of the country. Four years ago a few were to be seen in a domesticated state at Deer Lodge, Montana; and I heard of an Indian family on the Lumni River, Washington Territory, having—what is most unusual for the red race—a brace of kids in their *tepee* so tame that they would follow the children around like the spoiled and playful members of the domestic species.

The habits of the goat prove that it has all the peculiarities of the *Capridæ*. It loves the rocks and ledges of the most exalted ranges, and finds its daintiest morsel in the alpine and subalpine vegetation of the higher latitude. It generally moves in flocks of from a dozen to fifty, but the former number is the most common, as one leader is sufficient, and therefore any combats to decide which is to be commander is prevented. The young, which generally number two at a birth, are brought forth early in June amidst the lower ranges, say from 6,000 to 8,000 feet in height, and when they are old enough to leap about briskly their faithful guardians lead them to the higher peaks, where they are safe from all foes except man or the daring eagle. They seldom fall a prey to prowling bear or panther, owing to the facility with which the latter can procure food in the wooded regions below; hence they have few enemies to disturb the peaceful solitude of their life. While grazing, a flock has a sentinel to stand guard, and give notice of the approach of an enemy. The sentinel is always a male, and when he detects the presence of man or beast he sounds an alarm in a few short, peremptory calls. This brings his companions huddling to his side, and when all are assembled, the mothers and their offspring being in the centre, they dash for the most inaccessible peaks at their best pace, and never stop until they have placed a goodly distance between themselves and the object of their suspicion. Once on safe ground they throw out vedettes. These occupy some huge crag or elevated knoll that commands a view of the surrounding country—which is generally treeless—and are thus enabled to see all transpiring within range of vision.

To hunt them with any degree of success, therefore, requires patience, perseverance, an unusual degree of caution, and a contempt for arduous toil; and he who is willing to display these qualities need not fear a failure. A white hunter informed me that a couple of active terriers to drive the goats from their lairs, or to keep them at bay until the arrival of the Nimrod, would be the surest means of shooting them; otherwise one could only hope to get a shot at them by accident or unusual good luck. They are not, in reality, any more difficult to hunt than the big-horns, except, perhaps, that they are scarcer and frequent higher latitudes; and in some respects the bagging of a few would seem easier, as they lack the speed of the latter, and, as a rule, run obliquely to the right and upward, even if the wind is blowing in that direction.

A good idea for a hunting party would be to send some men above a flock, keeping well to the leeward, and for those below, if they have no dogs, to move to the windward, and advance rapidly so as to surprise the quarry. This would send them scampering in the direction of those concealed above, and result in an opportunity for a few good shots as they dash for crags or the mountains without any apprehensions of danger from above. Should they be checked even, instead of turning back they would break to the right and left, and try to reach the highest pinnacles, owing to a blind instinct they have that all their danger lies in the regions beneath, which they so scrupulously avoid.

The best time for hunting the animal would be early morning or the dusk of the evening, when it is out feeding in some rocky vale, as it is then more readily seen, and the hunter is enabled to approach it with greater facility by keeping to the leeward and in the shelter of crags until an opportunity for a shot is presented. It is very difficult to find during the heat of the day, as it lies concealed amid dangerous ledges or gloomy precipices, and any attempt to track it would lead to the detection of the hunter before the hunted, for its hearing is as acute as its nasal power. If pursued at all at this time, it should be with the aid of keen-nosed terriers, as they are sagacious enough to find any four-footed animal running wild, and to chase it, too, whether it be bear, cougar, goat, or weasel.

The only species of the *Ovidæ* found wild in the United States is the so-called big-horn, or mountain sheep (*Ovis montana*), and that is confined geographically to the region lying between the Rocky Mountains and the Cascade Range; the latter runs north and south through the States and Territories bordering the Pacific Ocean, at an average distance from the sea of perhaps 110 miles. This vast area is traversed in every direction by mountain chains varying from 4,000 to 13,000 feet in altitude, and it is amid their many-shaped peaks that the American big-horn loves to dwell, for not only is it there comparatively safe from all foes, except the red and white hunter, but it also finds there the daintiest of feasts in the shape of alpine and subalpine vegetation. Owing to the incessant warfare waged upon it in the Rocky Mountains, it is getting very scarce in that range, except in isolated localities; but in the Cascades it is nearly as abundant as ever, as its pale-faced enemies are comparatively few, and the red men can procure food in an easier manner than by pursuing it amid the snow-enshrouded haunts which it selects as a home. The amateur hunter who would bag a large number must, therefore, leave the regions in Wyoming and Colorado, in which it is usually sought, and go farther west to the silent mountains that traverse Idaho, Oregon, and Washington Territory, and there he will find no cause to complain of ill luck.

No animal in the world is perhaps more difficult of approach than the big-horn, as it is exceedingly keen of scent, unusually vigilant, and so cautious that it carefully reconnoitres a country from an elevated standpoint ere it presumes to advance toward it. The Nimrod who would therefore place the heads of many among his trophies of the chase must be not only of a vigorous form, to bear the climbing and rarefied atmosphere, but he must possess above all the qualities of patience, perseverance, and hardihood. The best time for hunting it is the early morning or late in the evening, as it is then out browsing, but in the middle of the day it is generally concealed among the crags, or in deep, sunless precipices. During the feeding hours, when a flock is together, one, generally a sturdy, vigilant male, mounts guard on an elevated knoll or rock, which gives him an extended view of his surroundings, and as soon as he detects the presence of a foe or any unusual object, he sounds an alarm, and all scamper off to the highest summits at their best pace. They bound from crag to crag, and vault chasms with the greatest ease, and, if pressed, do not hesitate to plunge headforemost into a gloomy precipice, deep enough, apparently, to shatter them into fragments. As they always escape unharmed, one is apt to believe the tales of the Indians—that they can leap on a crag 100 or 200 feet below, and striking it on their horns, rebound to their feet none the worse for the concussion. Having never seen them perform this feat, I am unable to vouch for its accuracy, but I can say that I have seen them make some terrific plunges and escape injury. When the scamper occurs, the lord of the flock leads it, and the young males form the rearguard, the lambkins and their dams being marshalled in the centre.

During a stampede it is often quite diffcult to tell the male from the female, both having horns alike, the main difference being that the appendages of a full-grown ewe do not exceed in size those of a two-year-old ram. In selecting subjects for the dining-table one must, therefore, have some experience, if he would not slay a tough old mother instead of a succulent young male.

The young, which usually number from one to two at a birth, are brought forth late in April or early in May, among the lower foothills; but as soon as they are able to move about briskly they are led to the higher pinnacles, where the vegetation is more tender and there is less danger from hungry wolves, bears, and cougars. While the dam is quite timid in the presence of man, and always flees at the detection of his approach, she will not for a moment hesitate to defend her young against wolf or fox; and in such contests she is often victorious, as her powerful horns are such effective battering-rams that a few blows from them are frequently sufficient to cause the most pertinacious of the *Canidæ* to retreat with a severe pain in its ribs or ventral regions.

The big-horn is an almost perfect facsimile of the Asiatic wild sheep (*Ovis ammon*), the difference between them being confined to size. It is almost totally distinct from its domestic congener, except in the ovine appearance of the face and the taste of the flesh. It is in the first place much taller, longer, and more spirited in action than the farm-yard variety; the neck is thicker, and it has scarcely any tail. The heavy recurved horns which adorn the sexes also make a marked distinction between both species; and instead of soft, snowy wool it is covered with coarse, tubular hair of a yellowish-brown colour, which changes to a dull white at the flanks and on the posterior side of the fore and hind legs. The horns are quite close together where they arise from the skull, and so heavy as to give the head a stunted appearance by contrast with their massiveness. The face is narrow and thoroughly ovine in form and expression; the eyes are large and full; and the legs, which are long and tapering, yet sinewy, are evidently intended for leaping. The body when in good condition is round, and quite broad in the back, and this gives the animal a graceful yet vigorous outline. The height of a full-grown male averages about 34 inches; length, 44 inches; horns, along curve, 29 inches; face, from base of horn to tip of nose, 10 inches; length of caudal vertebra, about 3 inches. When a ram of this dimension is seen perched on a towering rock among the mountain pinnacles, vigilantly surveying the landscape, he is a noble-looking fellow, and one which any hunter might be proud to place among his trophies of the chase.

The smaller game is unusually abundant. Hares abound everywhere, and some of them are both large and extraordinarily fleet, even for their family. The western red hare is found in all the wooded regions, the prairie hare roams over the great interior basins, the sage hare throngs the artemisian deserts, and the famous jack-rabbit (*Lepus callotis*), with its tremendous legs, ears, and large eyes, wanders at will over the country. It is coursed with greyhounds in some sections, and furnishes spirited sport, for the dog that would catch it must use its best powers.

Several other species of animals interesting for the chase, or useful in commerce, are more plentiful than they are in any other part of the continent. These include the beaver, otter, black-footed raccoon, musk-rat, badger, mink, pine martin, fisher or black cat, wolverine, showtl, and several species of squirrels.

The civet cat (*Bassaris astuta*) is found in the Klamath Basin, in Oregon, where it seems a wanderer from California. It is very playful, easily tamed, and equal [illegible] the house cat as a mouser. It is a great favourite with the [illegible]ers, and is eagerly sought by them, as it not only keeps their cabins clear of vermin, but also becomes attached to the person.

Numbers of persons in the country live by trapping and hunting during the winter, and many earn a small fortune in some seasons; but, being reckless about money matters, they soon part with it, and have to resume their business again as regularly as the season comes round, without perhaps owning a penny. The lover of field sports cannot find any region on the whole of the American continent equal to the division west of the Rocky Mountains for following his favourite pursuit; it may, in fact, be said to be the only game country now in the United States.

The game birds are very abundant also, and as for the more common birds, such as eagles, hawks, owls, woodpeckers, night-hawks, swifts, flycatchers, ground larks, thrushes, warblers, wagtails, swallows, wrens, finches, painted sparrows, trupials, magpies, jays, and crows and their kindred, the wooded regions of Oregon and Washington Territory teem with them. At the head of the game birds may be placed for size the swan, of which there are two species, the trumpeter swan (*Cygnus buccinator*), and the whistling swan (*C. Americanus*), and both are exceedingly common. They are found all over the large streams and lakes of the great plateaus west of the Rocky Mountains, but I have seen them nowhere so abundant as they are around the Klamath Lakes in Oregon, the Willamette, Columbia, and Snake Rivers, and the tarns in Eastern Washington Territory. Large numbers are killed every winter along the Columbia, and sold both for their flesh and feathers. The latter bring a good price, and the former, if not too old, is deemed palatable. I must say, however, that I do not care for it, as it seems to me dry and leathery, unless it be the flesh of a cygnet. Wild geese may be found all over the North-west in myriads during the autumn, and as they tarry three or four months ere they commence their winter migration, they afford most excellent sport. There are five species in all, namely, the snow goose, the white-fronted or laughing goose, the Canada goose, Hutchins' goose, and the black brant. There are about twelve species of ducks, excluding the mergansers, and they throng the bays and streams adjoining the ocean in such countless millions that the water can scarcely be seen under them. Every lake and river also teems with them, and though the Indians slaughter them indiscriminately, yet there seems to be no diminution in their numbers. It would be safe to assert that the *Anatinæ* are more numerous in the North-west than in any part of the globe, for the simple reason that they have there everything necessary for their existence, and few foes. The finest game birds in the country, however, are the *Tetraonidæ*, which are not only widely diffused, but very numerous, and within easy reach of towns and villages, so that one need not leave the comforts of civilization to indulge in shooting of the highest and most pleasant sort. The species most common in the spruce woods adjoining the coast is the *tyee kulla-kulla*, or chief-bird of the Indians, and the Franklin variety of the *Canace Canadensis* in scientific nomenclature. It is quite tame and unsuspicious, and pays so little attention to the presence of man that it can be approached to within a few feet.

The dusky grouse (*Canace obscurus*, var. *fuliginosus*), which is known as the blue, the pine, the mountain grouse, and the fool-hen, is one of the finest of its family, and also the most unsuspicious. Its flesh is white and of a delicate flavour, and equal in tenderness to that of the quail.

Being exceedingly common, it furnishes plenty of sport with little fatigue, the only exertion of any importance required being a use of the eyes, to find it amidst its leafy retreats. A covey will stand half a dozen shots before it will move from the trees;

and if the lower birds are shot first the whole lot may be bagged. They lie well before a dog on the ground, and when flushed, fly so straight, yet swiftly, that they are easily killed. They do not keep in packs during the winter, a dozen at the most forming the largest party in the same immediate neighbourhood. The best time for shooting them is from September to the 1st of December, as the spring broods are then in good condition for flight, and are plump and fat. This bird loves the mountains, so may be found on every chain clad with pines and firs that has an altitude of from 3,000 to 10,000 feet.

The sage-cock (*Centrocercus urophasianus*) inhabits the artemisian plains from Oregon to Wyoming. Although large and well developed, it is not shot by sportsmen, owing to the peculiarly acrid taste of its flesh,—the result of the sage on which it feeds. Were the bird "drawn" as soon as shot, however, its flesh would make a sweet morsel for a hungry man.

The Oregon ruffled grouse, a variety of the *Bonasa umbellus*, is common in all the wooded regions, but is more abundant in Oregon and Washington Territory than in any part of the country west of the Rocky Mountains. Its flesh is delicious, and some persons place it at the head of all gallinaceous birds in gastronomic qualities. It has the peculiarity of never "packing," like other members of its family, but remains in broods; hence it does not afford so many opportunities for making large bags as some of its congeners. During the summer and autumn, when it feeds on berries, its flesh possesses a delicate flavour, but in winter it has rather a terebinthine taste, owing to the character of its food, which is generally fir and spruce-buds.

A white-tailed ptarmigan (*Lagophus leucurus*) is an inhabitant of the mountains near the snow-line, and as it lives on tender, subalpine berries and vegetation its flesh is deemed to be very palatable. One of the commonest of the family, and the best representative of the prairie chicken found west of the Rocky Mountains, is the sharp-tailed grouse, or spotted chicken (*Pediocetes phasianellus*, var. *Columbianus*), as it lies well to a dog, flies strongly, and its meat is succulent, white, and tender. It is very fond of berries, and eats large quantities of the snowberry and the bearberry during the summer.

One interesting peculiarity about this species is the dances which they indulge in before they assume the cares of marital life each summer. When the breeding or mating season commences, they select a secluded spot, and the males travel or dance in a circle of about 20 feet there for days at a time. When the cocks take up their position—the hens never join in the dance, I believe, they being the auditors—they ruffle up the neck feathers, elevate the tails, and drop the wings close to the ground, but keep up a rapid vibration or drumming sound with them, and circle round and round each other in slow waltzing time, always presenting the same attitude of combativeness, but never touching each other. Their pace is sometimes fast and sometimes slow, but whatever the gait may be they look as if a proper execution of the dance was the most earnest work of their life. Some do not seem so ambitious to be "cock of the walk," by tiring others down, as they might be, for they frequently jump out of the circle when the waltzing is at its highest, and walk away with as pompous a strut as that of a drum-major. They keep up these terpsichorean evolutions for a fortnight, then devote their attention to raising broods of young waltzers.

This species flees before the advance of man, or rather civilized man, and its place is taken by the prairie chicken or pinnated grouse (*Cupidonia cupido*), a much less shy bird. This species was a stranger west of the Rocky Mountains a few years ago, but now it has migrated as far west as the State of Nevada, while it is found more frequently in Wyoming and Montana.

Following this family comes the *Perdicidæ*, of which the mountain quail (*Oreortyx pictus*) is the best representative, it being, when full grown, about a foot in length. The wings and tail and the posterior half of the body are rich olive brown above; below a purplish chestnut, barred with tawny, black, and white, the fore part being a rich slate blue, and the throat a purplish chestnut. The crown is ornamented with two slender keeled feathers, which attain a length of 4 inches in the male. This beautiful creature has a soft musical voice—at least the male has—and its crowing note of *coo-ee-coo-ee!* sounds pleasant amid the shrubbery of the silent hills. It is found throughout the hilly parts of Western Oregon, and few I believe go farther north, if I except some coveys in Washington Territory; while its eastern limit is checked by the Cascade Range.

The valley quail extends as far north as Washington Territory, generally keeping to the low vales adjacent to cultivated ground. It is not so handsome as the preceding species, nor so large, but its flesh is equally tender. It boasts a fine crest of from six to ten keeled black feathers, about an inch in length, and curved forward at such an angle as to give it an airy or jaunty appearance. It is never found in deep forests, nor where water and vegetation is scarce; nor does it frequent low swampy ground. This bird goes in large flocks, and when flushed takes to trees readily; and as it flies rapidly, it requires promptitude to bag a few ere the covey finds refuge in the coppices or the dense undergrowth of the forest.

The country is well stocked with other species of birds dear to the sportsman, yet few of them are shot, except the snipe family, of which there are twelve species, including sandpipers, tattlers, and sanderlings, and all are very abundant. There are five species of plovers, two of rails, two of turnstones, and two of phalaropes. The grallatores are more profuse than they are in any part of the continent, millions of them being found along the courses of streams, or on prairies adjoining lakes. The species embrace the sandhill and the brown crane, the night heron, great blue heron, and bittern. The Indians have a tradition that the latter and the crested grebe were formerly man and wife, but that owing to their constant quarrels they were turned into birds. The band-tailed pigeon frequents the woods in large numbers, and the curlew, marbled godwit, and avoset are scattered broadly from California to British Columbia. It is evident, therefore, that North-western America has few peers as a veritable Paradise for the lovers of the gun.

The game icthyc fauna of the country is really confined to the salmon family, at least few persons, except hungry red men, consider the other fresh-water fish worth catching while the former is so abundant. Some marine species, such as the rock-fish, perch, and tom-cod, afford good angling with a line or trolling with a spoon, while spearing flat-fish proves exciting amusement. The numerous trout are the most interesting to the true angler, however, and as they thrive in nearly every lake and in every stream, he need never want for the pleasures of the rod.

Excluding the members of the salmon family mentioned under the head of the Salmon Fisheries, we find in the interior, that is, in the region lying east of the Cascade Range, several species of fish which furnish excellent angling, but whose habits and mode of capture may not be known to a novice. One thing may be said in advance, and that is, that the appetites of Western fishes are very variable, and the bait that may succeed one day or week may not the next. The lures used embrace everything from natural and artificial flies to grasshoppers, salmon-roe, fish-eyes, minnows, meat, grubs, larvæ, angle worms, and even field mice and squirrels cut into strips; so the best plan would be to consult a local Walton wherever one angles, and find out from him which bait is best.

The fish most frequently heard of in the country is the mountain trout, of which there are several varieties; but the representative one is the *Salmo irridea,* which is very common, exceedingly plucky, and willing to rise to any kind of bait. It frequents quiet pools or slow currents, and seeks the shelter of logs, if they are in the water, during the heat of the day. It weighs from 3 lbs. to 7 lbs., and its flesh is hard and delicate in flavour.

The Rocky Mountain trout (*Salmo pleuriticus*), has crimson fins, is spotted with black above the lateral line, is bluish-silvery lead above, yellowish-white beneath, and the sides have short longitudinal bars of crimson. There are several varieties of this species which differ very much in their markings. It is common in portions of Idaho and Montana, so furnishes excellent sport, for it possesses high game qualities. It takes a fly best in the evening, grasshoppers in the morning, and any other bait according to its fancy.

A trout found very abundantly in the waters of Utah is the speckled trout (*Salmo virginalis*), which has a head much resembling the preceding, is greyish-brown above with purplish reflections, below an olivaceous tinge. One of its peculiarities is that the spots on the back often run into the conjunction of the eye. It is readily known from the *irridea* by the absence of dark spots on the top of the head, and having no caudal forking.

A species which has a broad range in the interior waters is the Lewis trout (*Salmo Lewisii*), which is a bluish-grey above, beneath a yellow or orange. Some of the fins are spotted black, especially the dorsal, adipose, and caudal, and its tail is well notched. It is distinguished from the preceding by having a smaller head and larger scales.

A small red-spotted trout is found in some of the northern affluents of the Columbia River, and another having greenish spots is common in the waters of Idaho, Montana, and Eastern Washington Territory.

The Yellowstone trout (*S. carinatus*), closely resembles the *virginalis* in form and colour, its fins and the side of the head being crimson, and its bright rosy hue ornamented with a few black spots.

A delicious red fish that rises to a fly or a grasshopper is found in the Wallowa Valley in Oregon, and in Payette Lake, in Western Idaho. Its flesh is deemed equal to that of any known fish, and those who have captured it consider it to be unapproachable in beauty of form and gastronomic qualities. Its *habitat*, so far as known, is limited to the two regions mentioned. A full-grown male measures 20 inches in length, and weighs from 3 lbs. to 5 lbs.

A species of mullet (*Siboma atraria*) is quite common in many rivers in Idaho and Utah, and not scarce throughout the whole of the Rocky Mountain Basin. It is a blackish-brown above and a greyish-white beneath, and has an elongated body. It rises to *larvæ*, but as its flesh is insipid it is little sought for by anglers. The long-headed mullet, variety *longiceps*, which rushes for a grasshopper, is found in Utah and portions of Idaho.

The mountain herring (*Coregonus Williamsoni*), and several of its kindred, are found from Washington Territory to Utah, but seems most abundant in the latter. It is a silvery white beneath and a bluish hue above, and has a small mouth like a herring. It is taken in nets, but it often rises to a hook.

The mountain grayling (*Thymallus montanus*), is indigenous to Montana, but is most abundant in the Missouri River above Helena. This beautiful fish, with its elegant form and rich colours, takes a fly readily, and fights for liberty as bravely as any species of the salmon family, to which it seems closely related. Its flesh is excellent, having a pale straw or a white tinge. Flies used for its capture should not be too gaudy, and the hook should not exceed a 6 or 8 O'Shaughnessy.

The *cyprinoides* are very profuse; but, except in a few places, they are not captured, though the chub is sometimes capable of furnishing some amusement, as it bites readily at a hook baited with grasshoppers.

CHAPTER XX.

LIFE AMONG THE FLATHEAD INDIANS.

Their manners, customs, religious ceremonies, and mode of thought—Their industries and probable fate.

THERE are a large number of Indians, divided into many tribes or bands, still in the region beyond the Rocky Mountains, and their habits, manners, and customs are interesting to many persons; but as these are nearly alike with all, even to the ceremony of becoming a warrior, I have not deemed them specially deserving of mention, except in the case of the Flatheads, who differ in physiognomy and in several social peculiarities from their congeners. The name Flathead was formerly applied to all those occupying the vast country lying between the Pacific Ocean and the Rocky Mountains, owing to their habit of compressing the cranium so as to give it a flattened appearance in the frontal and occipital regions; but it is now more particularly applied to tribes that dwell in Oregon, Washington Territory, and parts of Idaho and Montana, as they still retain the custom in a large degree, though it is fast dying out with the rising generation. The littoral Indians are short and stout, and those who use canoes much are broad shouldered and muscular, the result of the constant use of the paddles. Their arms indicate good brachial strength, but the lower limbs, through want of use, are comparatively weak and undeveloped. The tribes of the interior travel on horseback principally, and they have no strength of any consequence either in arms or legs, yet they are capable of great endurance, and can stand cold, hunger, and hardship better than the most athletic pale-face. The wealth of the coast Indians consists in their canoes, and that of the plains tribes in their mustangs; but blankets are also designated as riches, and a chief having two dozen is considered a millionaire. The littoral tribes being lighter in colour than those of the interior, some ethnologists have assumed that they are the descendants of cast-away Chinese and Japanese; and they attempt to prove the correctness of their theory by noting that both races have the almond-shaped eye peculiar to the former, that the outline of the nose is in nearly all cases the same, and that the face has the same characteristics, being high-boned with a strong jaw, and having the nose flat and broad at the base, with wide nostrils. The teeth are also large and strong, but owing to the use of half-cooked fish and meat, and roots covered with gritty dirt, they decay rapidly. It is a rare sight to see a male wearing a beard, it being deemed a vulgar appendage, and as soon as it begins to appear it is plucked out with the fingers or with a pair of pincers made of clam-shells; but if, through negligence or indifference, it is allowed to grow, a very sparse crop can only be obtained.

The tribes dwelling from the 40th to the 50th parallel of north latitude flattened the heads of both sexes in infancy; but those near the Rocky Mountains confined it to females. The object of the process was to beautify the facial outline by expanding the forehead; but its result was, and is, to make the physiognomy hideous. The compressing process is commenced on a babe a few days after its birth, and continued for several months, and often for a year or more. Girls are kept longer in bonds than boys, it being deemed necessary to give them a flatter coronal region, to heighten the effect of the eyes. The beauty so much desired is produced in the following manner; and although the process might seem painful to those who see the mummy-like infant for the first time, it is said to be painless, owing to the compression being applied gradually and its effects carefully watched. A bandage, made of cedar bark or strong cloth is placed on the forehead and drawn tightly backward, and fastened on the board to which the child is usually strapped. It is kept in this position for a week or two, when it is drawn tighter and tighter by gentle gradations, until, at the end of a year, the infant emerges from its bonds an unmistakable Flathead. When unbound, the skull is about two inches thick at the upper portion of the forehead, but is thinner higher up, so that the chin is on a line with the upper part of the occiput.

The sharpness of the crown of the head is made more striking in the adults by the habit both sexes have of parting their hair in the middle and allowing it to draggle over the shoulders. The flattening of the head is also considered an indication of nobility or gentle blood, and none but the children of free braves were formerly allowed to do it. All slaves captured in raids or in battle were specially marked to prevent social equality, and their descendants carried the badge of servitude with them in their round, bullet heads, for they were not permitted to flatten them.

The form of government among the North-western Indians is the tribal or patriarchal; and this has caused some ingenious ethnologists to consider them the descendants of the lost tribes of Israel: for, like them, they have their *sanctum sanctorum*; they think, like them, that they are the favoured children of the Great Spirit; like them they buy their wives by making presents to the parents; and their preparations for peace and war, their ablutions, feasts and fasts, and the purification of women are also similar.

In providing for the household, women are expected to do their share of the labour as well as the men, and to attend to all the menial duties, such as carrying tent-poles, cleaning and cooking meat and fish, digging roots, tanning hides, and making clothes for the family. Among those tribes where they are not so effective as men, as for instance among tribes that live by the chase, they are looked upon as inferior creatures; but among the fishing or littoral Indians, and those that live by agriculture or stock-raising, they are of more importance, and occupy a much higher position in the commune generally. They are usually good mothers, being devotedly attached to their children, and faithful servitors to domestic duties. Both parents are very kind to their offspring, it being a rare occurrence to see them strike a child, or even reprimand it rudely. The usual number of children in a family is two or three, but it sometimes reaches six or more. The cause of the small families is correctly attributed to their having a lower vital power than the whites, for they are in reality the vegetable race of this epoch, whose mission seems to be to represent humanity in certain quarters of the globe until it is supplanted by one more sturdy and vigorous. The low nervous power of the woman is proved by the fact that a mother will tie her horse to a tree, or beach her canoe, and in half an hour afterwards rejoin her companions with her new-born babe in her arms.

Much of this immunity from pain might be attributed to the constant exercise of the women in the open air, their simple diet and steady labour; but the greater portion might be conceded to a low nervous nature.

The *lex talionis* is the only justice the Flatheads know, and they act on that promptly. If a member of one tribe kills one of another, the murderer or his tribe must make restitution to the family of the deceased by giving presents enough to compensate for his loss. The compensation is made in horses, canoes, or blankets, and if it is not paid within a specified time, the murderer or some member of his family is killed at the first opportunity that presents itself.

Sickness is always considered to be the result of the sorcery of some enemy, who sends evil spirits into the body of the invalid; so the primary effort for a cure is to scare this demon or *mesatchee skookum* away through the power of shouting and drumming, and the incantations of the *tomanawas* or medicine man. The first person on whom I saw this system of medicine tried was an infant about twelve months old that was suffering from one of the many complaints peculiar to childhood. The mother held it near the fire, and a dozen men, led by the father, who sat near it, were beating a piece of wood with two sticks, and crooning a monotonous "hi, hi!" which increased in loudness of tone whenever the child bawled. An old woman, who would have made a perfect portrait of a Gorgon without the ophidian appendages, bent over it at intervals, made various cabalistic signs, pressed her mouth to its body, and suddenly spat an imaginary demon into a pail of water. She would look at the water for a few moments, then order the noise to commence, as the *skookum* had proved too strong for her that time, and had rushed back into the child.

This statement, which was listened to with much gravity, was the signal for more vigorous drumming and shouting, and this lasted, with few intervals, until midnight, when the wearied, perspiring visitors retired, after promising to return in the morning if the *skookum* did not leave during the night. At an early hour the following day a large party assembled in the room, and on learning that the child was no better they decided that the medicine man should be sent for, if it would be saved, as the demon was evidently unusually strong and violent. That important personage was summoned accordingly, and arrived in less than five minutes.

As soon as he entered he glanced at the child, gave a vigorous grunt to indicate that it was in a bad state indeed; then throwing off his outer garment, he commenced a most emphatic order of jumps, first to the right, then to the left, keeping time to a series of abdominal grunts that closely resembled the short notes of a donkey's bray. It was a steady "he ha! he ha!" but variety was given to this by the "hi ha! hi hi!" of the auditors, who shouted and drummed away for dear life. The doctor, after dancing for twenty minutes, jumped as high as he could, and gave a fierce scream or war whoop, then came back to the earth, and glanced at the child, which had fallen asleep through weariness. Pointing to it with a professional air of pride, he informed the audience that the spirit was an exceedingly strong one, and that but for his "great medicine power" he could not have driven it away so soon. This announcement elicited "uchs" of approbation, and the doctor having received a pony for his services, departed immediately without uttering a word of thanks.

These doctors are probably the greatest knaves on earth, and excel all the medical quacks of civilization so much that there can be no comparison between them. Two of them belonging to different tribes, when desirous of increasing their worldly goods, "put up a job," as the miners say, and bleed their dupes so thoroughly that some of them are left without a roof to cover their heads. The two rogues having decided upon their course of action, the stranger goes into the woods near which the encampment is usually pitched, and commences shouting in a peculiar manner. The knave inside rushes out of his tent or cabin in a state of alarm, and shouts back. The people then rush out and crowd around the doctor, and question him as to who is the object of sorcery. He pretends not to know at first, but after a while his knowledge increases, and he finds that two or three of the wealthiest members of the tribe are to be attacked at once by very virulent spirits, which are most difficult to overcome.

The threatened people implore him to save them, and he promises to do his best; but if they do not offer him a high price he feigns to be unable to do anything for them. When they have offered what he thinks is a sufficient remuneration he shouts back a vigorous defiance, leaps and dances and yells like a lunatic. The voice outside becomes feebler, and finally dies away, and the victorious doctor informs his auditors that he never before had such bad spirits to oppose, so they move away in high glee at having escaped the threatened assaults of the *mesatchee skookums.* The confederate calls in a day or two after and receives his share of the spoils, though of course not near what is due to him, and he returns to his own tribe to renew the same trick on them. These men cheat each other constantly; but as it seems to be understood, quarrels over spoils are rare.

I asked one of these doctors—a shrewd, intelligent young fellow, who had received a good education in a missionary school—how he could impose on his people, if he cared anything for them, by his incantations and mummery; and he replied, philosophically, that the Indians did not believe in "white medicine," and he might as well be one of those who received the honours and emoluments of a medicine man as any other. After this I had no arguments to advance, as it was not possible to induce the adults to change their faith. Doctors are not always puissant, however, for a member of his tribe may think that he has been bewitched by him, and in that case he generally pays his life as a forfeit for the belief he encourages. If a person thinks that himself or his family has been made ill through the malignancy of another, he is apt to kill the suspected person, and this sometimes results in a war between tribes that lasts for years. Now that most of the Indians are on reservations set apart for them, such practices are suppressed by the courts; yet, severe as the sentences may be, they cannot wholly eradicate the spirit of vengeance which characterizes the race.

The medicine men wield the highest influence of any persons in the tribes, as they are supposed to possess supernatural powers. It is they who analyse omens, suggest when and where to attack the foe, and when to retreat; they are in fact the tribal generals, and are followed and obeyed with an alacrity which is never conceded to chiefs. No war is waged without their approval; but this may be caused by their shrewd guessing that if they did not approve it they would lose *prestige*, and probably be slain. The Flatheads always decide upon a war in council, and when it is declared, a pipe with a red stem is sent to the allied tribes by runners, and every man who wishes to join the army takes a whiff or two, and this makes him a soldier as promptly as if he had taken the oath; but he is bound by no stronger tie than honour and the disgrace of forsaking his kindred. The features of the volunteer braves are then covered with a paint made of red earth, and, armed with their bows and arrows or rifles, take to the war path either alone or with a concentrated force. Their usual mode of fighting is to seek every available shelter, and to shoot whenever a foe presents himself within range. They make excellent skirmishers, but they cannot stand an assault in force; hence, in their contests with the whites, they have nearly always been defeated by a mere handful of volunteers. Like all their race, they depend on surrounding a foe to win a complete victory or to obtain a large number of scalps; but a few determined men can break through their line at any point, unless it is very strongly posted. Knowing that a body of defeated palefaces have the habit of retiring on the same line that they advanced, they place men in ambush on the line of retreat, and by this stratagem obtain more scalps than they could in a fair fight. Having been beaten by the whites in all the principal engagements, their spirit of resistance has been broken, and they are now the most peaceable of conquered people.

A custom peculiar to the Flatheads, and one apparently showing a generous trait in their nature, is the distribution of presents to neighbouring tribes at intervals. These are called *potlatches* or gift meetings, and are attended by all friendly tribes to whom invitations have been sent. When all are assembled in the host's village, rude speeches of welcome are made by the chiefs and orators, and these are followed by a generous feast of fish, game, and wild roots; but if the tribe is established on a reservation, the roots are supplanted by vegetables. When the dinner is over grotesque dances are indulged in on the green or in a large barn; but the terpsichorean pleasure is reserved for the males alone, the squaws being merely wallflowers. These are known by several names, such as the War, Peace, Green Corn, Salmon, Bear, Wolf, and Marriage Dances, yet all are confined to the same character of movements, with this exception, that if an animal dance is indulged in, two persons in the centre of the ring adorn the body with a wolf or a bear-skin, act as much like them as they can, and imitate their voice. When everything is ready, the dancers form in a circle, and at a signal from the master of ceremonies bend the body low on the hips, extend the legs, and commence jumping heavily first to one side, then to the other, but keeping moving steadily in a circle from left to right. Their only music is the beating together of two pieces of wood, the *he, ha! hi, ho!* of the leaders, and their own grunting sound of *hu ha! hu ha!* When the terpsichorean evolutions are finished, the dancers leap high into the air and give a prolonged and unearthly scream or war whoop, then retire to rest, or to chat with the admiring squaws that sit perched on their heels in an outer circle.

These feasts and dances may be kept up for a week, after which the presents are distributed, the donations being graded according to the rank of each person. As these meetings are the gala days of the year, the only events to bring friends together and to break the dull monotony of their lives, the women avail themselves of the opportunity they afford of dressing themselves out in all their finery of brass and glass beads and abelone-shell earrings, and parade the encampment in groups, conscious of their gorgeousness, and hoping they outshine all rivals. Their looks, gait, and manner would indicate that woman nature at least is the same the world over, and that vanity is a characteristic of the sex, whether it is barbarian or civilized.

The tribes present at the *potlatch* feel that they are under obligations to reciprocate the kindness shown them, and to do it in a proper manner each member carefully guards his earnings and presents for a year, so that when his special tribe issues invitations it may be able to outdo all others in generosity. The result is that a chief may receive back one year what he gave away the previous one, so that a *potlatch* is in reality only a ceremony which enables one tribe to loan another a few articles for a few months. They enjoy it so thoroughly, however, and make themselves believe so implicitly that it indicates true friendship, that it would be rather unfair to criticize it as to its genuineness.

If they did not get rid of their goods in this manner they would probably gamble them away, as they are as great gamesters as the Chinese, and frequently leave themselves without house, canoe, horse, wife, or even raiment, having sacrificed all to their irrepressible propensity. Their principal games of chance are confined to two, one of which is a mere matter of guesswork. Two wishing to play, one acts as banker and the other opposes him; the first moves a pebble rapidly from hand to hand, and when the other bets he extends his hands, and the latter guesses which contains the pebble, and wins or loses accordingly. Several can play this game at the same time, and it is an ordinary evening's amusement for a party of a dozen or more to form into two equal groups *vis-à-vis*, and see which side will win. They work so industriously at this simple game that the perspiration rolls off their features in small showers, and they often keep it up until daylight. When the bankers become weary, the pebbles are transferred to others, and the game is frequently continued night and day. The second, which is a little more complex than the first, can also be played by several at a time. A banker places two pins made of wood about a foot apart, and excavates a small hole behind them; the gamblers next take a position 10 feet from the hole, and try to roll into it, between the pins, a small wooden ball. If it enters, the player wins; if it rolls outside the pins, he loses; but if it rolls between them, yet does not enter, it is a "draw." This childish game is continued by many a desperate gamester until he has left himself as poor as he possibly can be, and nothing is left him—not even the honour of his family. Those who have mingled much with the whites have learned their games with cards, and these become the scientific gamblers of the tribe. Like their class in civilized communities, they have no conscience, as many an innocent *siwash* anxious to increase his knowledge of the white man's games has learnt to his sorrow.

Polygamy is quite common, though it may be said to be dying out a good deal among the rising generation, owing to the teachings of self-sacrificing missionaries and the example of the whites. Another reason for it is that food is so easily procured that a large number of wives is not required to supply the household, and that the number of children in a family seems to be steadily decreasing. The old men still cling to the theory that their dignity requires them to have at least three wives, so graduated in age that while the eldest should be his housekeeper and confidante, the youngest would be the companion and idol of his old age.

Wives are usually purchased from their parents for a certain number of horses, blankets, beads, or canoes, the price demanded being affixed according to the rank, beauty, or industrial habits of the damsels. There is no idle talk about love with them as a rule, yet a little romance does spring up occasionally. If the parents of a girl decide upon handing her over to some person she does not like, she slyly goes to the brave who has enshrined himself in her heart, and notifies him of the fate in store for her. Should he prove the gallant he ought to be, he steals away from his *tepee* in the evening, meets his lady-love at an appointed trysting-place, and both conceal themselves in the forest for three days. They then return to camp as acknowledged husband and wife, and neither parents nor proposed purchaser dare molest them. Should the girl be handed over to her husband in the usual form of "take her, and bless you, my children," she is immediately appointed director over all members of the household, and should she prove clever and industrious—for all seem kind and obedient—she receives even the homage of her mother-in-law, and the warmest approval of her lord. All the relatives of a family may dwell in the same house, and provision is common among them, for the communal system is the domestic form of government among the tribes. This household seldom indulges in bickering and scolding, and tearing the character of its members into shreds, for the simple reason that it is not civilized.

The duties of the young wife are to superintend the culinary department, and to make the moccasins and clothing of her husband and children. She is awake with the first gleam of dawn, and as her toilet consists in donning an old blanket, a petticoat made of cedar bark, or a gown of the thinnest calico, it is soon finished. A simple breakfast of fish or meat is then prepared, and when that is over the men go off fishing or hunting, and the women devote themselves to adorning the moccasins of husband and children with beads, or to making new ones. Owing to the cheap price at which cloth or blankets can be purchased at present, the men are relinquishing wearing buckskin, so that the women have little to do in making them clothing. While engaged in domestic labours, some female members of another household or another tribe may enter, and the work is then relieved by very small talk indeed about the affairs of everybody else. When the men return in the evening another simple repast is prepared, and after that has been eaten conversation is indulged in; but as their ideas are limited, and their language is sparse in words, and they have few or no incidents to talk about, it is generally limited in length and devoid of consecutiveness. After this the members retire, each to his or her own mat, and sleep soundly until daybreak again arouses them. Such a life must, as a matter of course, be wearily tedious; hence one cannot wonder that the red man is taciturn, and predisposed to do anything that would break the tedium of his life. What wonder if, without any means of engaging his mind, he should think gambling and debauchery the acme of pleasure, and fly to them whenever an opportunity presents itself? No matter what stage of intemperance he may be in, he seldom if ever strikes his children, for they are his *lares* and *penates.* The affection bestowed upon them can scarcely be excelled, and no matter who is hungry and thinly clad, they are not the parties.

The aged men and women are treated with great consideration in many families, but if they are too old to be of use, or are seized with a lingering malady or one likely to prove fatal, they are often placed in the woods to die by their dutiful relatives. Should you argue with a son that such conduct is most unnatural, he would in all probability tell you that his venerable parent was too decrepit to be of any other use than to eat the food required by the younger members, that the age reached was enough to give him or her all the pleasures life could afford, that all things die, that trees and flowers die when they become aged and withered, and that old people ought to die when they cease to be useful. This is a fair sample of an Indian's reasoning, which never exceeds the most selfish expediency. When cold and hunger have done their work on the forsaken creatures, they are wrapped in an old blanket and buried wherever it is most convenient. Those tribes who live on the Government reservations bury their dead in a graveyard, and place on the graves all the clothing and domestic utensils belonging to the deceased, that they may be able to set up housekeeping in the spirit land. Inasmuch as all the pots and pans are pierced with holes to prevent them from being pilfered by sacrilegious persons, it is very hard to understand how they can be useful in the *Saghalee illahee,* or land above. In this conception of life hereafter they are not much more illogical than many races who pretend to the highest intellectual attainments. When a person is dead, his or her name must never be mentioned, as it is supposed that every time it is uttered the body turns over in its rude sepulchre, and that the spirit is made restless, and therefore liable to wreak vengeance on those who disturb its repose. Should a person be asked about the name of any deceased member of the tribe, he would look thoroughly frightened and walk rapidly away, as if horror-struck at the thought of such a sacrilege. This leads me to state that Indians always receive their cognomens from some personal peculiarity or general characteristic. If he is a good deer hunter he is likely to be called *Mowitch*, or the deer; if he has killed a bear he is called *Itsoot;* if he has large eyes he is dubbed *Hyas Seeyahoos;* and so on throughout the catalogue of the red man's characteristics.

In religion they are deists. They believe in a *Saghalee Tyee*, or Great Chief above, and think that all great warriors will have a perpetual encampment in His dominions. This belief is one of the main reasons why Indians are anxious to be known as unconquerable braves, and why they display reckless courage in some cases. The number of scalps they can show at their death is considered the surest passport to the happy hunting or fishing grounds of the Great Spirit, and this explains why they are so fond of scalping the dead and wounded. Being clever fishermen is also deemed an excellent recommendation for obtaining a good fishery in the unknown land; but as all the Flatheads dwelling along the sea-shore may be placed in the category of excellent anglers, very few of them will be excluded from such a privilege if their belief or theory is correct. Several of those along the coast bury their dead in canoes near the sea-shore, that they may be near the element they loved so well in life, and that the sounding main may ever chant a requiem for their spirits.

The diseases most common to them are caused by the character of their food, which is too often but poorly cooked. They suffer severely from sore eyes, measles, and kindred maladies; and small-pox, when once amongst them, decimates them fearfully. A common remedy for all complaints is the sweat bath, steam being raised in a rude and small shanty, having only one air-hole in the top, by throwing water on heated rocks. The invalids enter from the summit, and as it is decidedly a social affair, two or more, according to the size of the hut, bathe together. When they have perspired sufficiently, they crawl out and plunge into a river or the sea, then hasten ashore and wipe themselves dry. This has been found an excellent remedy for fevers and rheumatism; but as they use it even for small-pox, hundreds have been killed by it. They are so rapidly decreasing before the advance of civilization, however, that were they not destroyed by such means, a few years at the most would see the last of them.

The industries of the Flatheads are exceedingly few, the principal being the manufacture of bags, baskets, and mats made of grasses or barks, and the construction of canoes. The baskets, being waterproof, are used for cooking, the water being heated by throwing hot stones into it. They are also used for carrying berries, roots, or fish, and when not otherwise engaged the smaller varieties are utilized for hats. Nearly all are ornamented with rude and inharmonious colours. It is in the construction of canoes, however, that they show their greatest skill. These are generally made out of a cedar-tree *(Thuja gigantea)*, and are hollowed out with an axe or an iron wedge. In former times the construction of one was a serious undertaking and the work of months, owing to the scarcity of any sharp instruments to do the cutting with; but since the advent of the whites, and the facility afforded thereby for procuring knives and axes, the labour has become comparatively light. After the canoe has been hewn into shape and excavated, it is filled with water, into which hot stones are thrown to generate steam, in order that the wood may be made more elastic, and thus enable the constructor to extend the sides; and this he does by inserting stout pieces of wood between them until they have stretched to the desired width. Many of the canoes are from 30 to 60 feet long, highly ornamented with uncouth figures of imaginary men and animals painted in glaring pigments, and can carry forty persons or 10,000 pounds of freight. The prow and stern are the same height, and extend above the middle. The sides are not more than an inch thick, and frequently less, and the bottom being flat, one can be floated in almost a basin of water. The paddles, which are 5 feet long, and have broad, long blades, are used on one side of the boat only when it is being propelled; and with every dip in the water the gondolier urges his boat onward, and steers it at the same time by bringing the paddle up near the stern when the stroke is finished.

When the Indians embark in a canoe they enter quietly, to prevent upsetting it; one then seats himself in the stern, and the others squat on their heels on each side as far as the prow, and paddling together drive their frail bark through the water with great velocity. These canoes will ride the heaviest seas of even Queen Charlotte Sound with ease, owing to their buoyancy. They are the most cherished property of the owners, as they are used for all means of transportation or travel by water, and for hunting and fishing excursions, and a fair sized one is considered a full equivalent for a young, buxom wife.

The language in general use among the tribes of the North-west in their intercourse with each other is the Chinook, a jargon composed of Indian, French, and English words. This was formed by the Hudson Bay Company as a means of communication with the aborigines, as the language of the latter was not copious enough for the purposes of traffic. Though the various tribes have their own dialect, and each differs radically from the other, yet all can converse in Chinook. The mongrel character of the latter is the first thing that strikes one when he hears it spoken. The French and English words engrafted upon it bear no resemblance to the same in the original language, owing to the inability of the Indians to pronounce certain letters, the principal of which is the letter R. For this they always use L, a change which the stranger cannot understand until he has become accustomed to the transformation.

Both sexes are very fond of showy dress, but the women, like the sex in general, carry it to the greatest extreme. Many young dandies and old fops wear ornaments of shell, copper, or brass through the nose and ears, or in strings around the neck, and if a gorgeously red, yellow, or striped blanket can be procured to set these off, they flatter themselves that they are more artistically attired than ever was Solomon in all his glory.

The women wear bracelets of copper, brass, and beads around the arms, and necklaces of the same materials, while any circular object, from an iron ring to a string of shells, is worn around the ankles. They are exceedingly fond of gaudy colours, and their raiment is generally rendered conspicuous by its glaring hues. The blanket is always the most prominent article of apparel, as it is the "loudest" in tone.

Such is the life and such are the manners and customs of a race fast dying away, one which, in a few years, will not have left a trace to indicate that it ever lived. In looking at the physical condition of the people we see that life is one continual struggle for food, and that the vices they display are the result of a wearisomely monotonous existence and a low mental organization; hence, few thinking minds will regret the time when Nature has placed them in the lowly cemetery where their rude forefathers sleep.

APPENDIX.

APPENDIX.

SINCE this work was written, I have received some facts about the regions described which necessitate an alteration in some of my figures, where they refer to population, commerce, and industries; for I learn that some of the States and Territories have doubled their population and trebled their commerce in three years, and that the number of persons who took up land in the whole division mentioned was 32½ per cent. greater last year than in any two previous years. One State alone is increasing its population at the rate of 20,000 per year, and the others show an equal ratio of increase. Stock-raisers, it seems, are trooping in there from every section of the Atlantic States, Canada, Europe, and even Australia, some of whom are devoting their attention specially to raising high bred horses and horned cattle, while others are engaged in sheep and goat farming with excellent success. The increase in wool and the fleece of the Angora goat has been over 400 per cent.—if such a term can be used—in three years. The yield of gold and silver for 1878 was about 17,000,000 dollars. New industries are springing up in several places, and copper and iron works are now in operation where they were not dreamt of three years ago. Gold, silver, and coal-mines have also been opened up in regions where they were unknown to exist at that time; and with the recent influx of population, it is supposed that the country has now entered upon its first real career of prosperity.

FINIS.

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